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TWO CASES OF TUBERCULOUS APPENDICITIS.

By JOHN ALLAN, M.D. Edin.

CASES of tuberculous appendicitis are fortunately rare, because the prognosis, according to most authorities, is unfavourable. Lockwood's* statistics, founded upon histological examination, show that it is met with in 2 per cent. of all cases. Fitz† gives a proportion of 8 in 257 diseased appendices or 3.11 per cent. In a series of 80 cases of appendicitis seen and treated during life, I have met with the two cases to be described below. Tuberculous appendicitis constitutes a distinct variety of appendicitis, and it differs conspicuously as regards symptoms, prognosis and treatment from some of the other cases of so-called chronic appendicitis. It is possible that some of the cases described under the term "chronic appendicitis" are tuberculous in nature. It is difficult, however, to make a positive diagnosis until one sees the condition of the appendix at the operation or post mortem.

That the appendix alone may be the seat of tuberculous mischief is probable, and it is also probable that associated with tuberculous peritonitis tuberculous appendicitis may occur, because in making

* Lockwood, 'Appendicitis: its Pathology and Surgery,' 2nd edition.

† Quoted by Battle and Corner, 'Surgery of the Diseases of the Vermiform Appendix,' 1904.

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post-mortem examination on cases of tuberculous peritonitis pathologists have found in a few cases the appendices chronically inflamed and much thickened (with caseating nodules on the peritoneal surface), and evidently the seat of tuberculous mischief. It is difficult to say which is the primary condition, but most likely it is sometimes the one, and sometimes the other.

Before going any further it may be well to describe the two cases.

The first case was that of H. W—, a boy, aged 11 years, who was first seen in May, 1906. He had suffered from vague abdominal pain for some time, with an occasional more acute seizure in the right iliac region. He had been steadily losing weight for months, sweated profusely at night and suffered from a dry, hard cough. About this time he had an acute exacerbation of the symptoms, which pointed definitely to mischief in the appendix. He suffered from pain in the right lower abdomen, there was tenderness on pressure over that area and palpation was resisted. There was a definite tumour in this region, the pulse-rate was 110 per minute, and the temperature 101.2° F. The bowels were constipated. This attack subsided under careful medical treatment, but there remained a hardness in the right iliac fossa and the abdomen was distended and dull. The white cells were estimated at 5000 per c.mm. As mentioned above, he had a dry, hard cough, but had no expectoration. There was a family history of pulmonary tuberculosis. Repeated examination of the chest failed to detect any signs of pulmonary affection in the case under consideration. After the acute symptoms had subsided an operation was undertaken and the appendix removed. This was a matter of some little difficulty, owing to the many adhesions that had formed at and around the appendix. The appendix was chronically inflamed and much thickened, and there was some caseating material on its peritoneal surface. It was not examined histologically. There was also tuberculous peritonitis with fluid in the abdominal cavity. After the operation the patient markedly improved. He put on weight, the abdominal distension disappeared, the fluid became absorbed and he was much more active than formerly. I saw the patient more than two years after his operation and I found that the improvement which had taken place immediately after the operation had been maintained. He was a stout, active boy and his general health was good.

The second case was that of H. T—, a youth, aged 17 years. The history obtained was most indefinite. The patient complained of

chronic pain (not very severe) over his appendix region, but it was never of such severity as to make him lie up, although it was liable to inconvenience him when at work. There had been gradual loss of weight, lassitude, anorexia, etc. The bowels were constipated. There was little to be made out on physical examination. There was a want of elasticity and "doughy" feel about the abdominal wall, and in the right iliac fossa an indefinite fulness could be made out, but this could hardly be called a tumour. The temperature was not raised, and the pulse was 92 per minute, rather faster than normal. A leucocyte count only showed 4500 leucocytes per c.mm. There was no family history of tuberculosis. At the operation an elongated, thickened, and nodular appendix was found: and there were several enlarged mesenteric glands in the neighbourhood. The appendix and enlarged glands were excised. The latter were caseating in their centres, but there was no caseation in the appendicular nodules. No histological examination was made. As in the preceding case marked improvement in general health followed the operation. Before his discharge from hospital (about six weeks after the operation) he had gained over a stone in weight, and when seen four months after the operation there had been a further gain in weight of a stone and a half. The operation benefitted him both physically and mentally, for before the operation he had become very depressed about his progressive failing health.

In tuberculous appendicitis the attack is, as a rule, characterised by extreme chronicity, although in some there may be occasional acute exacerbations. But underlying all there is the chronic, slow, but progressive changes in the appendix. There is invariably thickening over the appendix region, and this hard, indurated mass is often very great indeed. The clinical picture presented is much the same as in ordinary appendicitis, with the exception that the symptoms are not, as a rule, of such an acute character. This obtains even in acute exacerbations. Constitutional symptoms, such as sweating, loss of weight, etc., are practically always met with. There is no leucocytosis as a rule. Bloodgood* has stated that in chronic cases without active formation of pus the leucocytes are generally subnormal. I have not found this so in ordinary chronic (non-tuberculous) cases: in these I always obtained a leucocyte count above normal (taking 6000 as normal), though never very high. In the two cases described above the number of white cells was below normal. Of course, this may have been mere coincidence, but if it be true that in tuberculous cases the leucocytosis is subnormal, then one would have a

* Quoted by Ewing, 'Clinical Pathology of the Blood,' 1904.

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valuable guide for diagnosing the variety of appendicitis, and once the diagnosis is established, in giving a prognosis and advising treatment. There may be considerable anæmia with general wasting and debility. The behaviour of the temperature is very variable. In some it follows a course typical of tuberculosis: the temperature is swinging in character and each night it rises 2° or 3° F., to fall next morning to normal. This often lasts for weeks or months. In others, however, the temperature is not raised during the course of the disease, except when acute exacerbations supervene. In many cases there is a persistently rapid pulse. In the two cases described the pulse-rate was increased, and this is of special interest in the second case, where there was nothing of an acute character to cause the increased rate. Before operation the pulse-rate of H. T.—averaged 92 per minute, while after operation the pulse varied from 72 to 76 a minute. Many consider this persistently rapid pulse a sign of grave import and commonly met with in the tuberculous.

Mr. Lockwood* maintains that tuberculous appendicitis should only be diagnosed after histological examination, as the naked eye is quite unreliable for the recognition of tubercle. While this may be necessary in some obscure cases I cannot see that it is required in other perfectly straightforward cases. If one meets with a case where there is a history of chronic appendicular pain, where there is to be felt in the right iliac region an indurated mass, where there are constitutional symptoms such as sweating, debility, loss of weight, etc., and where at the operation is found a chronically inflamed and thickened appendix with caseation on its peritoneal surface or with caseating mesenteric glands in the neighbourhood, then surely the diagnosis of tuberculous appendicitis is quite justifiable. To diagnose tuberculous appendicitis without seeing the appendix is difficult, and such a diagnosis is purely hypothetical. Still, the association of chronic attack, indurated mass over appendix, and constitutional symptoms is very suggestive, and a provisional diagnosis of tuberculous appendicitis based on such data will, in the majority of cases, be confirmed at the operation.

With regard to treatment, there seems to be a pretty general consensus of opinion that surgical measures are the best, and that the appendix should be removed wherever possible. Medical means are rarely satisfactory. It is doubtless true that by careful medical treatment the patient may be kept in comparative comfort, but every now and again there is some return of the acuter symptoms, and sometimes the patient appears to be going rapidly downhill.

* *Vide supra.*

Probably in this variety of appendicitis there is not the same risk of perforation, gangrene, etc., as in the ordinary acute appendicitis, although Mr. Lockwood* has placed on record a case where there was empyema and impending perforation of the appendix in a patient suffering from tuberculous appendicitis.

Medical treatment resolves itself into the general treatment of tuberculosis. The patient should, if possible, be treated in the open air, should have a liberal, easily digested diet, and should be given tonics such as iron and arsenic, and also malt and cod-liver oil. Locally many applications have been tried, but probably the best are some of the mercurial preparations, such as "blue ointment" or 5 per cent. solution oleate of mercury. In some cases inunction with ol. morrhue may do good. In tuberculous peritonitis in infants and young children mercurial inunction occasionally appears to exercise a beneficial effect.

Surgical treatment would seem to offer the most reliable means of dealing with this disease. The ideal course is to remove the appendix, and where the mischief is distinctly localised one might reasonably hope for permanent benefit after such a procedure. It often happens that the appendix is so bound down by adhesions that to attempt an appendicectomy would entail such a prolonged operation that it is impossible and would be dangerous. It would be interesting to know what would be the effect of doing a simple laparotomy and washing out the cavity with normal saline solution. For many years I was extremely sceptical about the beneficial results of laparotomy in cases of tuberculous peritonitis, but the marked improvement which followed laparotomy in several such cases which have come under my notice has caused me to modify my opinion. The following case which I saw three years ago made a deep impression on me. A. B—, a boy, aged 8 years, was admitted to hospital on account of tuberculous peritonitis. The case was a typical one and there was a history of chronic ill-health, lassitude and loss of flesh. The abdomen had been gradually increasing in size, and on admission it was much distended and there was abundant evidence of fluid within the peritoneal cavity. A laparotomy was performed, and the intestines were found to be all matted together and the peritoneum was simply riddled with tubercle. Nothing further was done, and the wound was closed. The boy was treated in the open air, and general measures of treating tuberculosis were enforced. Practically no improvement took place, and three weeks after the operation, at the express wish

* *Vide supra.*

of his parents, the lad was allowed to be taken home. A bad prognosis was given to the parents. Five months after the operation the people were removing from the district, and the mother brought the boy up to the hospital to be seen. It was almost impossible to imagine that the child was the same boy. He was robust and active and had gained very considerably in weight. The mother informed me that he was able to romp and play with other boys—a pleasure he had not been able to indulge in for over a year prior to the operation. On examining the abdomen it was found to be almost as elastic and doughy as in the normal child. Not the slightest evidence of fluid in the abdomen could be detected.

Arguing from such cases of tuberculous peritonitis, one is inclined to ask if tuberculous appendicitis could not be treated on similar lines. Of course, such treatment would only apply to cases of tuberculous appendicitis, where, for the reasons given above, dissecting out the appendix is impossible or inadvisable. The risk attending a simple laparotomy is nowadays so infinitesimal that one can confidently advise such a procedure, and in my opinion such a modified operation would in some instances hold out a better prospect of relief, or even cure, than all the medical means at our disposal.

With regard to prognosis the general opinion is that the prognosis is unfavourable in tuberculous appendicitis. Mr. Lockwood, in his book already referred to, relates several instances in which death occurred from tuberculosis of other parts, though the appendix had been removed. If one were lucky enough to get cases in which tubercle primarily attacked the appendices, and in which no secondary infection had taken place, then removal of the appendix might offer a fairly certain hope of cure. Tuberculosis of the appendix as a secondary affection has a much worse prognosis, and similarly, in tuberculous appendicitis associated with tuberculosis in other parts, no matter where the tubercle originated, the prognosis is unfavourable. In cases with associated tuberculous peritonitis one might reasonably suppose that, all things being equal, appendicectomy would be more likely to be followed by cure in cases in which the appendix was primarily affected and the peritoneum secondarily, than those in which the primary source of infection was peritoneal and the appendix was subsequently affected. In cases associated with advanced pulmonary tuberculosis it is very questionable if removal of the appendix should be advised; but in *early* pulmonary lesions there is reason to believe that removal of the

appendix may not only effect a local cure, but also beneficially influence the lung condition. Everything seems to point to the hopelessness of medical treatment, which fails to check the spread of the disease, and which appears powerless to effect a cure.

In conclusion, I am not going to draw any definite deductions from the two cases given above. I shall merely say that good health two and a half years after operation (as in the case of H. W—) is very satisfactory and indicative of permanent relief; and, moreover, the physical and mental improvement of H. T— was so marked as to justify the measures taken. I have merely touched on a few of the points in connection with this disease, on such points as have appealed to me. The subject is one of great interest, and requires further investigation for its elucidation.

THE RELATION OF DENTAL DISORDERS TO TUBERCULAR DISEASE.

By FRANK MORLEY, M.R.C.S., L.R.C.P., L.D.S.,

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THE enormous importance of the state of the mouth in the treatment of general diseases, and still more in the prevention of those diseases in children, is perhaps even now not fully appreciated by the majority of medical men. It is true that there are some children who are the picture of health and whose mouths are still in a most unhealthy condition. They are swallowing pus and micro-organisms all day long, and yet their resisting powers are so extraordinary that they remain in good health. But these are the lucky few, and they are running risks that they should not be allowed to run. The majority of children with bad teeth and unhealthy mouths are usually of pale and sallow complexion, are peculiarly liable to colds, chills and sore throats, their whole vitality is lowered, and they are prone to be attacked by any epidemic that is about. And, that a septic mouth is a predisposing cause of such a disease as tubercle is a fact that is forcibly brought home to those who have much to do with children's mouths, and which is all too commonly forgotten by those who have the health of children in their care.

It is generally known and accepted that mouth-breathing is a contributory cause of phthisis. Every dental surgeon knows that

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the habit of mouth-breathing is often due to dental causes, and that adenoids do not account for every case. The child has an exposed nerve in a temporary molar and gets in the way of masticating insufficiently so as not to bring pressure on that tooth; or the gums are tender, and when the mouth is kept open the painful contact of the teeth of the two jaws is prevented. Thus the habit of keeping the lips apart and breathing through the aperture is acquired. This is quite apart from the danger of enlargement of the tonsils due to septic infection from the mouth. Thus a double channel for tubercular infection is opened up.

Enlargement of glands in the neck is far more common than the enlargement of glands elsewhere in the body. The more usual causes of bad teeth—ear disease, pediculi, inflamed tonsils—easily account for this condition of things; but the fact that tubercle should so frequently attack the cervical glands is perhaps not so easy of explanation, unless it be that the glandular enlargement is at first simply inflammatory and later becomes infected with tubercle. Then the question arises as to how the bacillus gains access to the gland, and here again the great importance of the condition of the teeth comes into prominence. It may not be that most tubercular cervical glands are infected through the teeth or gums, but that they may be, and often are, has been proved beyond doubt. Cornet injected tubercle bacilli into a decayed tooth and got as a consequence a tubercular enlargement of the nearest cervical gland. Starck has found the bacillus in a carious tooth, in the pericementum about its roots, and in the enlarged glands in connection with the tooth, so there can be little doubt of the possibility of infection through this channel. There are no lymphatic vessels in the pulp of a tooth, and to this must be attributed the fact that tubercular glands in the neck are not even more common than they are. The bacillus has to penetrate the apex and affect the periodontal membrane before it gains access to the lymphatic system. Again, if bad teeth and roots exist in a mouth a chronic lymphadenitis is very likely to be set up. The child has a bad taste in the mouth, anorexia and insufficient nourishment and a general lowered vitality, so that the chronic lymphadenitis is particularly inclined to lead to a tubercular infection of the gland, and possibly from that to a general tuberculosis. The moral is easy to see. Children's mouths should be regularly inspected and any caries promptly treated. If this cannot be efficiently done the tooth should be removed. In no case should a septic root be allowed to remain in a child's mouth, even if painless. If a gland enlarges, the cause should be found

and removed as soon as possible. If no cause can be found and the gland does not rapidly yield to treatment it should be removed by surgical means. If left, it may become tubercular and lead to pulmonary infection. Dentists have become too conservative in their attempts to save carious temporary teeth, and perhaps run a risk of tuberculous infection. A pretty jaw is much to be desired, but if it is to surmount a much scarred neck perhaps it would be better to have sacrificed the appearance of the jaw and avoided the enlarged glands breaking down and causing sinuses, besides the grave danger of a general infection. In hospital practice temporary teeth have often to be sacrificed that could possibly be saved if more time were available. In these cases where temporary teeth are lost, care must be taken that the child is properly nourished and fed, and express directions given to the parents as to diet. If the child is to be treated to the best advantage, more frequent consultations should take place between doctor and dentist.

With regard to the treatment of pulmonary tuberculosis, the dental aspect of the question is not sufficiently brought before the minds of general practitioners. Good work in this respect has been done by Mr. F. Lawson Dodd, whose paper before the Odontological Society in June, 1906, is worthy of serious perusal. In this paper he laid great stress on the proper nourishment of the tissues both in the prevention and treatment of phthisis. With the former I have just dealt; as regards treatment it is perhaps only necessary to point out that part of it consists in giving the patient large quantities of food. If that food is swallowed whole it is not properly digested and does little good. If the patient is treated without the mouth being first put into good order, not only is there no appetite for food, but it is swallowed in large lumps. Painful teeth and tender gums are naturally avoided, and one of the great means of treatment is lost, viz. that of increased nourishment. In addition to this, the food is swallowed in company with the bacterial products of the septic condition of the oral cavity, which alone must tend to decrease its nutritive value, if not to more serious effects, as pointed out by Dr. Hunter. If a consumptive child has lost its power of proper mastication it is much more difficult to treat that child properly. The modern treatment of consumption aims at getting the patient into a germ-free air. He is removed to a high altitude, his surroundings are kept scrupulously clean; we even see that the rooms he inhabits have rounded corners so that no dust or germs can find a resting place. Well and good; but what is the use of all that if you leave a perfect breeding-place for all sorts of

organisms in his mouth? Moisture is present in a suitable temperature, and everything conducive to the comfort of the bacillus, including carious teeth, septic roots, and swollen and inflamed gums. Another point is that sanatoria are usually far removed from the dental world, so once there, dental treatment is unlikely, unless in the case of severe pain. Unless all patients can have their mouths put in good order before they are sent to sanatoria, then each sanatorium should possess a dental surgeon, and his post would be no sinecure. From all points of view more dental treatment would do much, not only to prevent children acquiring tubercular disease, but also to aid in their treatment. The more forcibly this can be impressed on the minds of those who have delicate or tubercular children under their medical care, the better for their patients and themselves.

A CASE OF ACUTE LYMPHATIC LEUKÆMIA.*

By CLAUDE JOHNSON, M.B., CH.B.,

Resident Medical Officer, The General Hospital, Birmingham.

THE patient, a boy, aged 2 years, was brought to the General Hospital, Birmingham, on October the 26th, 1908, and was admitted under the care of Dr. Stanley Barnes, to whom I am indebted for kind permission to publish the case.

The patient was a well-developed boy, and had had no serious illness. The present illness began about one month before admission to the hospital, and the first sign of disease that was noticed was a swelling in the left side of the neck. As he was treated at the Queen's Hospital at that time we may presume that there was no general glandular enlargement one month before the patient's death, so that the disease was very acute in its course.

On admission to the hospital there was found to be a large tumour in the region of the left parotid gland. The lymphatic glands of the neck and in the axillæ and groins were markedly enlarged, discrete, and hard to the touch. The skin showed many petechial hæmorrhages. There was also bleeding from the gums.

On examination of the thorax there was a large area of dulness extending from the supra-sternal notch down the sternum to the level of the fourth costal cartilages, and reaching for a short dis-

* Specimens shown at the Birmingham University Medical Society on November the 11th, 1908.

tance each side of the sternum. This was considered to be due to enlarged mediastinal glands, or to a large thymus. On examination of the abdomen the flanks were noticed to be bulging. The spleen was large and extended about two inches below the left costal margin. It was firm, moved on respiration, and its anterior edge felt very sharp. The liver was considerably enlarged. A tumour could be felt in each flank, which subsequently was shown to be an enlargement of the kidney. The child appeared very pale; there was a large quantity of blood passed *per rectum*, and also a little was coughed up. The urine was found to contain blood. The blood-count showed that there were 1,200,000 red cells, and 517,000 leucocytes per c.mm. The leucocytes consisted chiefly of large lymphocytes; there were relatively few polymorphonuclear cells, and no myelocytes were present. There was a marked degree of poikilocytosis, and many of the red cells were nucleated. The patient gradually became worse after admission, and died suddenly on October the 31st.

At the post-mortem examination a great increase was found in the lymphoid tissue all over the body. An enormous glandular mass hung down in front of the pericardium. The thymus was very large. There was a slight excess of turbid fluid in the pericardial sac, and numerous petechial hæmorrhages were present under the pericardium. The heart-muscle was pale and soft, and the valves appeared normal. The lungs showed slight broncho-pneumonia. The bronchial and mediastinal glands were greatly enlarged. There was considerable enlargement of the mesenteric glands, which were very pale and showed no caseation. The mucous membrane of the intestines was pale, and there was slight enlargement of Peyer's patches. The liver weighed 21 oz., and was large and pale; the pancreas appeared normal. The kidneys, which were enormously enlarged and weighed 9 oz. each, appeared very pale with prominent *venæ stellatæ*. On section there was marked enlargement of the cortex with extreme pallor. Numerous areas of hæmorrhages were scattered throughout the cortex. The supra-renal glands were normal. The spleen, which weighed 4 oz., was enlarged, firm and pale, being uniformly coloured. The brain appeared normal. Both middle ears contained a considerable amount of glairy fluid. The bone-marrow of the shaft of the femur was pale in colour and creamy in consistence.

Microscopical examination.—All the lymphatic glands showed enormous hypertrophy of lymphocyte-forming tissue. In the kidneys the tubules and Malpighian tufts were widely separated by an infil-

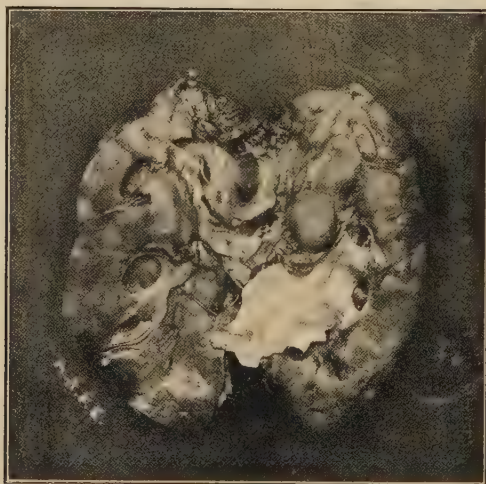
tration of lymphocyte-like cells, contained in a fine reticulum of young fibrous tissue. Numerous hæmorrhages were to be seen scattered throughout the cortex and medulla. Soudan III preparations showed a small amount of fatty change in the cells of the convoluted tubules. In the lungs there was a slight amount of catarrhal pneumonia. Masses of cocci were here and there present in the alveoli. In the spleen no distinct boundary was seen between the Malpighian bodies and the pulp. The latter was infiltrated with lymphocytes. There were also numerous small hæmorrhages. The liver showed no abnormal changes. In the bone-marrow films there was a large number of lymphocytes with numerous red cells, both nucleated and non-nucleated forms being present.

A CASE OF HYDRONEPHROSIS.*

By GEORGE CARPENTER, M.D.

THE child, a boy, aged $2\frac{1}{2}$ years, was admitted into the Evelina

FIG. 1.



Hospital for Sick Children on January the 25th, 1889, with pertussis and double broncho-pneumonia, and died the same day.

The left kidney was mottled all over, pale and violet on its surface and on section (*vide* Figs. 1 and 2).

* Exhibited before The Society for the Study of Disease in Children, on March the 20th, 1908.

FIG. 2.

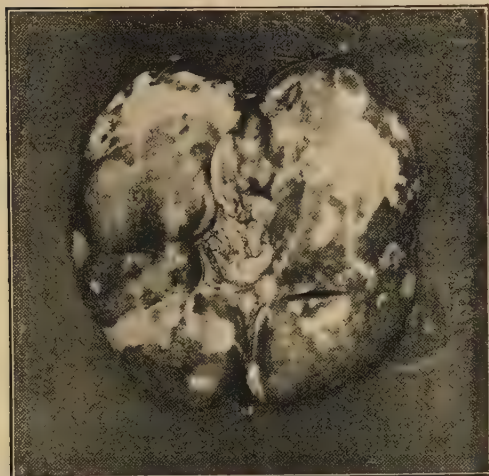
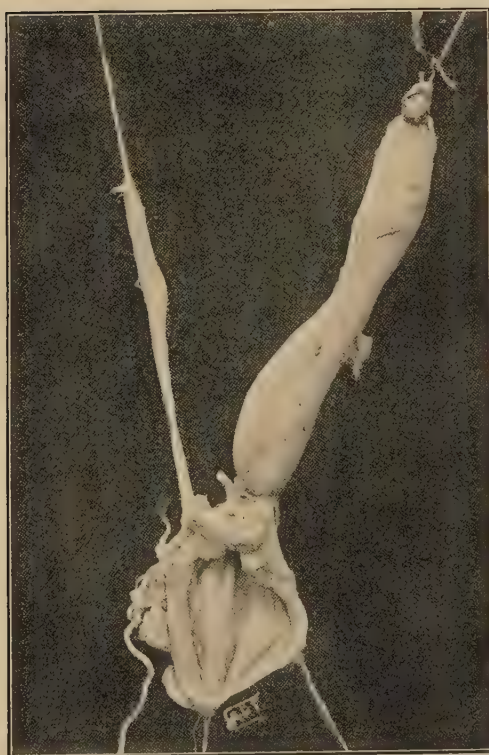


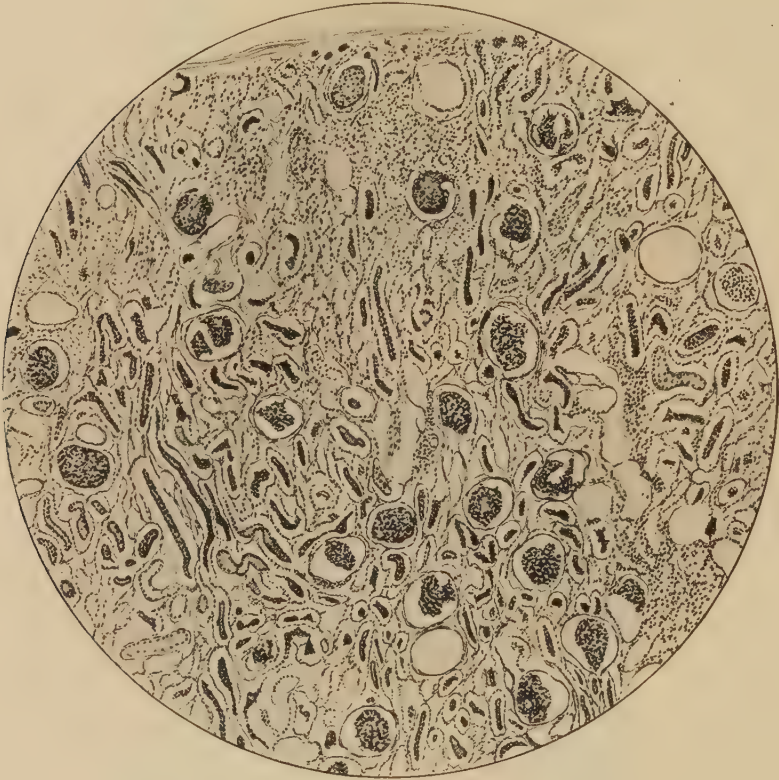
FIG. 3.



The left ureter was much dilated (*vide* Fig. 3) the constriction being close to its junction with the bladder.

The pelvis and calices were dilated (Fig. 1). The papillæ were natural. The mucous membrane was intact.

FIG. 4.



Sections of the kidney showed patches of round-celled infiltrations and unevenly distributed fibrosis, with compression and destruction of the renal parenchyma (Fig. 4). There were signs of dilatation in some of the cortical convoluted tubules.

TWO CASES OF TETANUS NEONATORUM.*

By GEORGE CARPENTER, M.D.

CASE 1.—Baby R—, aged 1 week, son of an upholsterer, was admitted into the Queen's Hospital for Children on November the 3rd, 1907. It was breast-fed and took well up to five days old (two days previous to admission) and the "cord separated quite well." Fuller's earth was applied. On the sixth day the mother noticed that the mouth could not be opened. "When it cried it went stiff and threw its head back." When it was admitted it was very rigid, the jaws were fixed continuously, the hands were clenched, but with the feet nothing special was observed, and it did not arch its back. "It had great difficulty in breathing, as if it were going to choke, it got blue in the face, and when it was fed nasally it became black in the face."

On examination there was a muco-purulent discharge from the right nostril and a slight discharge from the navel, which was not inflamed. The latter was examined bacteriologically and the pathologist found in the smears *Diplococcus proteus*, *staphylococcus*, but no specific organisms. The fontanelles did not bulge, but the neck was rigid and very slightly retracted. The arms were flexed, the forearms flexed on the arms, and the hands were clenched. The legs were rigid, but the toes were not involved. He was cyanosed and had inspiratory retraction. Some moist sounds were audible over the chest, being possibly conducted sounds from the nose. Both sides of the chest behind gave quite a boxy note to percussion and the laryngeal sounds were particularly well conducted over the left side. When the chest was being examined he had much hic-cough and became cyanosed. The mouth was partially open but the jaw was stiff, and when manipulation was made the child became blue, the mouth foamed and the jaw became very decidedly fixed. On these occasions the contracting masseter muscles could be felt to be strongly acting. The day previous the sister in charge of the ward said the jaw was tightly fixed all day and nothing could be got between the lips, the spasm never relaxing, whereas to-day there is decidedly less spasm, and an attempt has been made to feed him by the mouth, but unsuccessfully, as spasm is at once induced by the operation. The child while laying still was fairly comfortable, but any disturbance caused tonic spasm of the face muscles, arms, hands,

* Read before The Society for the Study of Disease in Children, on April the 10th, 1908.

legs, and trunk; the masseters were markedly affected. During these spasms the infant became extremely cyanosed and the pulse was slow and irregular. Temperature on admission 97.8° F., on the morning of the 4th 97° F., and in the evening 97.6° F., the pulse at this time being 140 to the minute and the respirations 80 to the minute. He was given bromide and chloral $\bar{a}\bar{a}$ gr. iij *quartis horis*.

On the evening of the 4th the spasms were more frequent and he was ordered 20 c.c. of anti-tetanic serum, which was injected into the subcutaneous tissue of the abdomen at 6 p.m.

He died at 7 a.m. the following day, the morning temperature being 101.4° F.

At the post-mortem examination there was found collapse of the lungs; the heart engorged on the right side; the brain congested; the tissues round the umbilicus thickened and unhealthy-looking. The other organs were normal.

CASE 2.—Baby Brown, aged 1 week, son of an upholsterer, was admitted into the Queen's Hospital for Children on April the 2nd, 1908. Nothing amiss was noticed with the child until tea-time the previous day. The mother had been attended by a Salvation Army nurse. The cord came away two days after birth; nothing was done to it, there was no discharge from it, and it was dressed with Fuller's earth. The child began to cry and it was thought to be suffering from stomach-ache. Its mouth became stiff, but prior to that it was kicking and clenching its hands. Its mouth subsequently became less stiff, and they got some milk down with a spoon, but later on in the evening it could not take the breast, and the following morning it was admitted at 6.30 a.m.

On examination.—The face is screwed up and risus sardonicus is a prominent feature. The finger can just be inserted into the mouth, which is kept tightly clenched. At times the infant is quite limp and at others the body and limbs become rigid. He is more rigid in the lower extremities than in the upper. When the rigid state passes away there is some twitching. When a spasm comes on he froths at the mouth and gets blue in the face. He is unable to swallow and turns black in the face if milk is put into the mouth. The eyes are kept closed; knee-jerks not obtained; plantar reflex present, no definite Babinski. Heart, nothing abnormal detected; respirations irregular and jerky.

At 5.30 p.m. he was lumbar punctured—no fluid obtained. He was injected with 5 c.c. of anti-tetanic serum (Lister Institute) through the cannula and with 5 c.c. into the skin of the flank.

Chloral and bromide, āā gr. iij *quartis horis* were administered by the mouth. Temperature on admission 97° F. and in the evening 101° F. Feeding by nasal tube inducing spasms he was given Slinger's meat suppositories by the bowel. At 8.50 p.m. he had another spasm, got very blue, and suddenly expired.

At the post-mortem nothing was found but cerebral congestion, which was very marked. The brain was very soft and diffuent to the touch. The right side of the heart was congested, as also the liver. Nothing else abnormal was observed.

A RETROSPECT OF OTOLOGY, 1908.

By MACLEOD YEARSLEY, F.R.C.S.,

*Senior Surgeon to the Royal Ear Hospital; Medical Inspector of
L.C.C. Deaf Schools.*

No very startling or valuable papers upon otological subjects in children have appeared during the past year, but there has been a fair number of interesting and instructive articles.

External ear.—MUMMERY (B. J. C. D., v, 71), has shown an interesting instance of supernumerary auricles, and MACLEOD YEARSLEY (B. J. C. D., v, 121), a large angioma of the pinna and meatus. MELLAND (B. J. C. D., v, 481), has published a case in which a supernumerary auricle was supposed to be due to maternal impression, but in which the impression was proved to have occurred after the time the pinna is formed. Some unusual cases of foreign bodies in the ear were recorded by GIFFORD (B. U. N. C. M., iii, 33).

Middle ear.—In a useful paper entitled "The Menace of the Swimming-Tank," COBB (B. M. S. J., July the 2nd, 1908), describes cases of acute otitis media directly caused by diving into the tank, and considers they were not due to infection by contaminated water, but to putting the head under. As I myself have, however, recently seen a case of double aural furunculosis in a boy, which was directly traceable to the swimming-bath, infection probably plays a not unimportant part. KENEFECH (A. J. O., April, 1908), divides the otitis of children into two classes, that arising within the tympanum from specific poisons in the circulation, and that caused by infectious processes from inflammation of structures in the immediate neighbourhood. He considers that when adenoids are present they should be cleared out as soon as the age and condition of the patient will allow. A similar paper on otitis in children has been written by

NEWMANN (D. M. Z., No. 31), who agrees largely with Kenefech. ELLIS (C. S. J. M., vi, 222) says nothing new in his article on acute otitis media in infancy and childhood. CABOUCHE (A. M. O., May, 1908), writing on the varieties of middle-ear infection occurring in children, pleads for early antrotomy. BURKE (C. M. J., July the 25th, 1908), published some unusual mastoid operations in children. The complications of acute and chronic suppuration have received several contributions. CORNET (J. L., iii, 568), has published details of a case of thrombo-phlebitis of the lateral sinus in a child aged 4 years, treated by opening and drainage of the sinus, without ligation of the jugular. A month of septicæmia ended in recovery. The original otitis was due to measles. Neglect of a chronic suppuration was responsible for the death of a girl aged 12 years, from cavernous sinus thrombosis, under Hanna's care (J. L., xxiii, 364). Several instances of labyrinthine surgery in children have been published in 1908. MACLEOD YEARSLEY (B. J. C. D., v, 121), has recorded a fatal case of labyrinthine suppuration in a girl aged 13 years, and a successful operation in a boy aged 8 years. FRASER (J. L., xxiii, 495), performed vestibulotomy on a boy aged 11 years with good result, and SCOTT (A. O., April, 1908), published a very instructive case of acute internal hydrocephalus secondary to streptococcal infection of the labyrinth in a boy aged 14 years. This observer, with WEST, has since advocated continuous drainage of the cranio-spinal cavity in meningitis.

Internal ear.—Apart from labyrinthine suppuration a few contributions to the literature of inherited syphilis only have been made. The aural manifestations of that disease have been dealt with by MACLEOD YEARSLEY (B. J. C. D., v, 195), and GLOVER (A. M. O., February, 1908), has reported a case of inherited syphilitic central deafness in the second generation in a boy aged 13 years. WANNER (J. L., xxiii, 430), has reported interesting results in the functional testing of these cases.

Lastly, the question of deafness in relation to *school medical inspection* has been made the subject of a long paper by MACLEOD YEARSLEY (B. J. C. D., v, 467).

REFERENCES.

- A. J. O.—'American Journal of Obstetrics.'
- A. N. O.—'Annales des Maladies de l'Oreille.'
- A. O.—'Archives of Otolgy.'
- B. M. S. J.—'Boston Medical and Surgical Journal.'

B. J. C. D.—'British Journal of Children's Diseases.'

B. U. N. C. M.—'Bulletin of the University of Nebraska College of Medicine.'

C. S. J. M.—'California State Journal of Medicine.'

C. M. J.—'Cleveland Medical Journal.'

D. M. Z.—'Deutsche medicinische Zeitschrift.'

J. L.—'Journal of Laryngology, Rhinology, and Otology.'

Editorial.

IN the year 1909 there arises an unusual opportunity for the BRITISH JOURNAL OF CHILDREN'S DISEASES to be of great service in promoting the study of disease in children. The opportunity arises from the fact that the children in the elementary schools of England are for the first time being systematically examined by medical officers appointed for that purpose. Such an examination ought to help greatly the welfare of the children, for by it many remedial defects should be brought to light. Thereby the parents should be educated to take more care of the health of their children, and should specially be taught to keep them clean. We notice in one medical officer's report that he comments severely upon the verminous condition of the girls; the pointing out of this to the parents can only have the effect of reducing the evil. The backward and mentally defective children will be picked out, and in consequence they will receive more detailed and personal attention than has up to the present time been given them. We shall soon receive statistics of the health of all the children in the elementary schools, prepared by the medical officers, and therefrom much useful information should be gained.

The examination of the children requires particular care, and a greater amount of knowledge on the part of the medical officers than is usually acquired by the average medical practitioner. Disease, as it manifests itself in children, needs special study, and it is hoped that the BRITISH JOURNAL OF CHILDREN'S DISEASES may help those who have undertaken the very responsible work of making the examination of the school-children of England. The examination is possible of doing a great amount of good, by making the lives of many children happier and more healthy on account of the

advice to the parents which it necessarily calls forth. The examinations must be performed by competent men, or otherwise they will be worse than useless, and even harm may be done in various ways. To give an example of the harm which may result, we noticed in another medical officer's report that in a large number of children tuberculosis of the lungs was diagnosed. We venture to point out that tuberculosis of the lungs is a very rare condition to find in children of the age of those who attend school. Phthisis in children similar to that which occurs in adults is a very rare disease. In many of these cases of tuberculosis of the lungs we feel sure that the diagnosis is wrong. These children require special care and treatment, but it may be of serious consequence to inform the parents that their children are tuberculous when no such condition is present. It requires a considerable amount of skill and practice to diagnose tuberculosis of the lungs in children, for there are many conditions which may be mistaken for it by those who have not had much opportunity to examine the chests of patients of this age.

We feel sure that this JOURNAL will be of special use in drawing attention to such points as this, and therefore we enter upon the sixth year of publication in the hope that good and useful work in promoting the knowledge of disease in children may be done in this connection.

The Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, December the 18th, 1908.

Dr. GEORGE CARPENTER, *Chairman of Council of the Section, Vice-President of the Royal Society of Medicine, in the Chair.*

Discussion on Whooping-Cough.

Dr. PORTER PARKINSON, in opening the discussion, pointed out that in England the death-rate per million from this disease has diminished of late years, from 527 per million in the years 1861-70, to 450 in the years 1881-90, and in 1895 to 316. It is more fatal in Scotland than in England, and less so in Ireland. The contagion must be a specific organism, several of which

have been described, but the real one appears not yet to have been isolated with any certainty. The infection is conveyed by the sputum, which is said to be most virulent during the catarrhal and early paroxysmal stages. The virus remains active after drying at least for several weeks, as has been proved by epidemics arising on board ship where no other source was probable. One half of the cases occur during the first two years of life, and it is not infrequent during the first six months, showing a stronger tendency to attack the young than any other infectious disease. He said that Holt had recorded a case of a child, aged 12 days, whose mother was suffering from the disease at the time the child was born. There is a leucocytosis, especially in the paroxysmal stage. It is easy to overlook the primary disease when bronchitis or pneumonia has supervened, as the whoop under these circumstances frequently disappears. Dr. Porter Parkinson then referred to the complications, including vesicular and interstitial emphysema, acute bronchiectasis, glottic spasm, polyneuritis, papillitis, albuminuria, post-nasal catarrh, in addition to those commonly observed. Two thirds of the deaths from whooping-cough occur during the first year of life, chiefly from lung complications. Paroxysmal coughs, which may be mistaken for whooping-cough, were mentioned. A short survey was then given of the various methods of treatment, including the diet and various drugs, and bromoform was recommended; it should, however, be dispensed in solution, 1 drop to an ounce of water with a few drops of alcohol, 1 to 6 drachms being given in a dose.

Dr. L. GUTHRIE said that in 1578 De Baillon, of Paris, described accurately an epidemic of whooping-cough which he described under the name of "la quintain" or "tussis quintana," as it was known by people as occurring in paroxysms of cough every five hours. Evidently that was the origin of the name, as quintana meant a five-hourly cough. With regard to the idea that the cough was dependent on the pressure of enlarged bronchial glands on the vagus nerve, another form of paroxysmal cough was that of influenza, the difference being that in the latter there was no vomiting as a rule, nor a whoop, and it yielded suddenly to treatment. The paroxysmal cough due to enlarged bronchial glands was largely recognised by enlargement of both sides and impairment of resonance at a second or third intercostal space near the sternum with harsh tubular breathing, and the Eustace Smith murmur on retraction of the neck. He believed the cough depending on enlarged bronchial glands only occurred in children who had already had whooping cough; it was apt to occur weeks or months after the original attack. That was important, as such children were sometimes excluded from school on the idea that they had an infectious disease. Sudden death after whooping-cough must be very rare; he had only witnessed one death after a paroxysm, namely, in a boy aged 3 years, who had been suffering from whooping-cough three weeks, who was playing in the waiting-room when he had a fit of coughing, at the end of which he became black in the face, gave a few feeble gasps and died. Artificial respiration failed to restore life. There was great distension of the right side of the heart, but nothing else to which he could ascribe death. Perhaps at the present day such a death would be ascribed to lymphatism. He thought cerebral hæmorrhage was very rare in pertussis. The only case he had seen was in a child, aged 5 years, who suddenly became aphasic and hemiplegic on the left side. The child had hereditary syphilis; her father was under him for advanced tabes some months before. He thought the hæmorrhage in the child was due to disease of the cerebral vessels; if such vessels were healthy they would not

burst. He agreed that the prognosis was generally good. As to treatment, he had tried most of the things recommended, but had not found one better than another. Bromide and belladonna were his favourites for relieving the symptoms.

Dr. WALTER CARR said the difficulties of diagnosis might arise from enlargement of the bronchial glands, influenza and bronchiectasis. In the latter case the cough closely simulated that of whooping-cough. The history helped greatly, and physical examination revealed the dilated bronchial tubes, though that did not exclude the possibility of whooping-cough as a complication. The cough just stopped short of the whoop. He proposed to deal particularly with treatment. It was difficult to determine the value of merely palliative treatment. There were many gradations in severity, and sometimes when mild it could not be diagnosed except from the epidemic prevalence of the disease. Severe cases were often complicated by bronchopneumonia. The early manifestations were no guide to the subsequent severity of the disease, a parallel case to which was that of smallpox. He laid great stress on the importance of an abundant supply of fresh pure air. An important point was as to whether the complications were due to the particular poison or infection of whooping-cough or to the fact that the micro-organism fell into bad company, the bad company being responsible for the mischief. He thought the bronchitis was due to the same causes which produced it in the ordinary way. A common cold was not caught as a rule in the open air, but in crowded and ill-ventilated rooms, and on that ground pure fresh air, at a temperature of about 60° F., he regarded as very important, care being taken to protect the child from any draught or chill. As long as the temperature was 100° F. or over, it was better to keep the patient in bed, and if there were signs of bronchitis the child should be kept in a room, or preferably two rooms, at the same temperature. He was doubtful of the efficacy of various vapours and fumes; he had tried various kinds. The bronchitis could be treated on ordinary lines, and his practice was to add bromide of potassium, though he did not know how it acted. He also had some faith in the application of a liniment; mothers often said the child was better after the use of such. He asked whether there were any specifics for diminishing the frequency or severity of the paroxysms. He had not tried bromoform, but from what he had heard he was prepared to do so. He had been afraid of over-drugging, with the consequent upsetting of the intestinal canal. Belladonna had an established reputation, and in the later stages he thought it diminished the frequency and perhaps the duration of the attacks. A complication which was often troublesome was vomiting; it was particularly marked where there was digestive disturbance. Hydragryum cum cretâ and bicarbonate of soda and rhubarb might do good, and tend to lessen the vomiting. Care should be exercised in regard to food and feeding. When a child was vomiting constantly it was well to give a little food to bring on a paroxysm, and then, after the vomiting, to give a little more food in the hope that it would be retained and give some benefit.

Dr. J. D. ROLLESTON said that from 1899 to 1907, 131,830 scarlet-fever cases were admitted to the Metropolitan Asylums Board Hospitals, and of these 756, or .5 per cent. were suffering from whooping-cough on admission. Another 855, or .6 per cent., subsequently developed whooping-cough as a complication. Of 55,557 cases of diphtheria, 340, that is, .5 per cent., were suffering from whooping-cough on admission, and another .4 per cent. developed it as a complication. As was to be expected from the difference

in the age incidence the association of whooping-cough with enteric fever is very uncommon. Only one case of 9354 cases of enteric fever had it. The association of whooping-cough with more than one other infectious disease is also very rare. He did not think that whooping-cough had any very unfavourable influence on any acute infectious disease, with which it was associated. In the case of diphtheria the incidence of laryngeal cases is apt to be higher than usual when whooping-cough is concurrent. Severe paroxysms in tracheotomy cases might necessitate sudden replacement of the tube after it had been removed, and render its stay in the trachea unduly protracted. Trousseau had remarked that the paroxysms of whooping-cough disappeared during scarlet fever, but he did not confirm this.

Dr. W. EWART regarded whooping-cough as one of the greatest calamities in the specialty, not because it was so often fatal, but because it left so much behind and spoilt so many lives, in the way of emphysema and right heart distension, and sometimes by collapse. He advocated a careful study of every phase of the disease, with the determination to grapple with the condition. Consultants were not able often to continue their treatment of cases of the disease, as they were mostly seen by general practitioners or sent to hospitals. As soon as pyrexia commenced, the doctor should be on his guard lest it might develop into whooping-cough, and if there were any harmless remedies they should be tried so as to ward off an acute attack. He advocated systematic hygiene of the upper respiratory tract, so as to inhibit the growth of whatever micro-organism was responsible for the disease. He used instillations of almond oil and olive oil into the nostrils in all infections of the respiratory tract with great benefit. If he suspected the onset of whooping-cough he placed the patient in the best conditions of resistance, fresh warmed air, if necessary damped a little. He was a strong believer in suitable drugs, and had much faith in iodide of potassium, which was also very good for pneumonia, broncho-pneumonia and bronchitis, particularly of the asthmatic type. It seemed to greatly benefit in clearing the tenacious secretion which favoured the growth of organisms. Strong poisons, if properly limited in dosage, were mostly good remedies. He also believed greatly in the inhalation of terebine, and its use in a liniment. Parolein was comfortable for the mucous membranes, and was well combined with belladonna. The stomach was benefited by castor oil and grey powder. The paroxysms of cough sometimes caused the thorax to be driven in, and the chest arrangements to be mechanically disturbed. A respiratory belt, as advocated by Kilmer, was also good. His main contention was that every symptom and every stage should be carefully and systematically studied with the determination to eventually combat the disease.

Dr. RUSSELL WELLS asked for how long a period whooping-cough was infectious? A child with the disease might go on for three months and towards the end of that time there was an occasional whoop and sickness. Was the child infectious during all that time? He doubted it, as did some French authors. With regard to the pathology, the curious spasm, the vomiting, the tendency to hæmorrhages and the long course made it a very definite disease. It would be agreed that whooping-cough was a bacillary or microbic infection, but why should that give rise to the symptom-complex? He thought the symptoms and the peculiar brassy cough were due to a derangement of some anatomical part or definite set of physiological functions, the particular part affected being different from that in an ordinary cold or coryza. He had long thought that in the whooping stage

of whooping-cough they were dealing with a post-infectious condition. A somewhat parallel case was that of diphtheria, and in post-diphtheritic paralysis no diphtheria microbe might be present. Possibly in whooping-cough there remained a nerve irritation or exaltation. Some years ago it was advocated that cocaine should be given by the mouth in fair-sized doses instead of painting the throat. He had given a dosage based on a grain three times a day for the adult. He had never seen any evil effects from it, and he did not know any drug which approached it in shortening the attack, easing the vomiting and discomfort. At some future occasion he would like to hear the experiences of any others who had tried the drug.

Dr. J. H. FRANCIS NUNN agreed with Dr. Ewart in insisting on paying careful attention to all the symptoms and phases of whooping-cough. Many of the children died from cerebral congestion due to the fits of coughing. Whooping-cough was more difficult to recognise because of the similar cough associated with influenza. His eldest boy had influenza some years ago, and had frequently had it since, and so severe were the paroxysms that he sometimes finished them on the ground. Twice whilst he was at Epsom College the medical officer there stated his belief that the influenzal cough was whooping-cough. After a child had had whooping-cough, the cough of any cold afterwards caught was apt to have a spasmodic character. He agreed as to the importance of fresh air, but reminded members of the old-fashioned method, which was said to be efficacious, of sending patients to gas works to inhale the vapour.

Dr. MILNER BURGESS pointed out that only two papers on whooping-cough were included in the 'Reports of The Society for the Study of Disease in Children.' Very little had been added to the subject during the last eight years. In an experience of thirty years he only remembered one case of meningeal hæmorrhage, and he asked why it was so infrequent. The great points to guard against were the violence of the cough, the vomiting, and the epistaxis. He had only seen death occur in one case. He had used hydrargyrum cum creta, bromide, syrup of chloral hydrate, and the liquid extract of creosolin. He laid stress on very careful dieting with liquid food in small quantities, given immediately after a paroxysm.

Dr. BIERNACKI said that the treatment of the paroxysm had been very fully discussed, and little room remained for comment. He would like, however, to mention Naegel's method of dealing with the paroxysm when so severe as to endanger life at the moment, namely, by pulling the jaw downwards and forwards; in some cases immediate relief resulted. Mild paroxysms might be associated with fatal broncho-pneumonia. This was especially true of neglected children among the poor, who lived in dirty surroundings, and were allowed out of doors too soon, and in unsuitable weather. Careless parents required more supervision than was possible at present, and doubtless the day would come when whooping-cough would be made a notifiable disease.

Dr. LEOPOLD GOFFE said he had treated cases of whooping-cough during the last five or six years, and had used cocaine as an integral part of the treatment. He had not administered it by the mouth, but painted it on the external auditory meatus, and on the membrana tympani. The formula recommended was: "Cocaine, hydrochlor., 23 gr.; liquor hydrarg. perchlor. 20 m, glycerine, 4 dr.; water, 4 dr."

Dr. E. I. SPRIGGS referred to a point raised by Dr. Burgess, who had asked why meningeal hæmorrhage was not commoner. The arteries were so strong that they would stand a sudden rise of blood-pressure without

breaking, particularly in youth, owing to their great elasticity. In a research published in the 'American Journal of Physiology,' the blood-pressure was recorded during muscular exertion, and a demonstration was given of the sudden rise of blood-pressure which was sustained by the vessels in severe exertion.

Dr. BERNARD BAILEY said, with regard to infection, that when he was house-physician to the Children's Hospital, Shadwell, children were often sent, after six weeks' whooping, to the Convalescent Home at Bognor, yet he never heard of any child there catching whooping-cough from a child so sent.

Dr. MEREDITH RICHARDS thought that most of the risk of infection was in the early catarrhal stage. His practice was to exclude children from elementary schools for five weeks, and to exclude contacts for one month.

The CHAIRMAN (Dr. GEORGE CARPENTER) said he dealt with the notes of 466 out-patients and of 100 in-patients, a grand total of 566 cases. Of the 466 out-patients there were 217 males and 247 females.

At 12 months and under	111
Above 12 months and up to 2 years	58
At 2 years and up to 3 years	56
" 3 " " 4 " " " " "	90
" 4 " " 5 " " " " "	66
" 5 " " 6 " " " " "	53
" 6 " " 7 " " " " "	21
" 7 " " 8 " " " " "	5
" 8 " " 9 " " " " "	5
" 9 " " 10 " " " " "	—
" 10 " " 11 " " " " "	1
Total cases	466

The youngest infant under his care with typical whooping-cough was aged 3 weeks. The liability of conveying the complaint by fomites at its commencement is undoubted, but the virulence of the contagion is quickly lost. For how long children remain infectious after the appearance of the paroxysmal cough is debatable. He considered children free from infection when they cease to expel mucus from their respiratory passages. Certainly whooping with the cough does not denote active pertussis, for whooping is very apt to recur from trivial causes in those who have recently suffered from that complaint. Thus an attack of bronchitis is apt to light up a paroxysmal cough in the one-time whooping-cough patient, and illustrations were afforded in regard to these. The whooping habit, when once acquired, is not readily forgotten by some nervous systems. In some children, during the whole of the illness whooping is only a very occasional occurrence. In others whooping is the feature of the complaint. As the disease declines the whoops are usually replaced by coughs without that. It has been stated that the incidence of broncho-pneumonia and pneumonia lead to the disappearance of the whoop. He had noticed both these complications unattended by whooping, but had often seen advanced cases of tuberculosis, consolidation of the lungs, and extensive pneumonia associated with pronounced and frequent whooping. Some observers have held that there is a mysterious relationship between pertussis and measles, but the records of his out-patient cases do not lend much support to that view. There were 35 children in whom measles and pertussis were more or less directly associated, or in 7.5 per cent. of the cases. Varicella attacked 7 of

the 466 cases, or 1·5 per cent.; in 2 the whooping-cough was declining. Scarlet fever and diphtheria were not represented among the out-patient cases.

The complications occurring among these 466 out-patients were as follows:

Chest complaints.—In some 50 of them the absence of chest complaints was expressly stated, and in 293 the physical signs of bronchitis were present in varying degrees. In 8 there were lobar pneumonia and patchy bronchopneumonia, 3 of them being less than a year old. It is only rarely that laryngitis is the initial prominent feature of the attack, and then it is not until the advent of the typical paroxysmal cough that the nature of the malady is realised.

Sickness was a prominent feature of the complaint, as shown by his out-patient statistics, but not nearly so common as he had supposed it to be. The notes indicate that 159 children, or 34 per cent., suffered from vomiting. On controlling these figures by his in-patient records, where careful observations were made in regard to the question, 62 per cent. of the cases had sickness at one time or another during the illness—nearly double that of his out-patient figures. However, in carefully inquiring into this apparent disagreement, it appears that no less than 11 children vomited only once during the whole attack, and in 13 sickness was present on only two or three occasions. In only one case was sickness excessive, vomiting happening as frequently as ten times during the twenty-four hours. In 7 cases only was sickness pronounced.

Mechanical effects.—In regard to the mechanical effects on the blood-vessels during the paroxysms, he was not prepared to find so small a number with epistaxis (7·3 per cent.) and with hæmoptysis (8·5 per cent.). On comparing in-patient practice with out-patient experiences, he found that 17 per cent. of the in-patients had hæmoptysis in trifling degree, and 17 per cent. had epistaxis. The amount of blood lost from hæmoptysis is usually not much, the sputum being merely streaked with bright blood. He had only once seen blood lost in considerable amount. It occurred in a case complicated by tuberculosis of the lungs. He confessed that the infrequent occurrence of epistaxis surprised him, and for this reason it is quite unusual to find a really healthy naso-pharynx by digital examination in young children. He had methodically examined the naso-pharynx in many hundred presumed-to-be-healthy children, as a matter of fact, over 500 somewhere about the age of five years, and a normal mucous membrane was not common. All conditions of abnormality were present, from slight enlargement of the adenoid follicles in that situation up to a complete blocking of the naso-pharynx with adenoids. And the abnormal mucous membrane is very friable, leaves particles of adenoid tissue on the exploring forefinger, and readily bleeds on contact with it. Epistaxis is therefore a complication that one would expect to arise under high venous pressure.

Ocular hæmorrhages.—There were only five cases (0·9 per cent.) among the out-patients with hæmorrhages of the eyeball, and all had subconjunctival effusions obscuring the sclerotics. Two of them suffered from hæmorrhages into the lids as well, the eyes being well “blackened.” Among the in-patients there were no extra-ocular hæmorrhages, but he met with one limited intra-ocular effusion of blood in a child, aged 22 months, who died of broncho-pneumonia, verified by post-mortem examination.

Changes in the retinal blood-vessels.—He thought that large veins and tortuous blood-vessels occasionally occurred in the complaint as well as optic

neuritis. Hæmaturia is very rare, but he had once met with that complication in a girl, aged 5 years. She had albuminuria also, and after three weeks blood appeared in the urine and continued on and off for a period of two and a half months; when last seen she had neither hæmaturia nor albuminuria for some days. There were no renal casts, but this was the only example of pronounced albuminuria that he found in fourteen recorded observations. In one child there was a trace of albuminuria, so that albuminuria was definitely absent in twelve children.

Prolapsus ani was noted in four out-patients only, and in four in-patients, and in two of the latter it happened very frequently. It was therefore an uncommon complication. Involuntary evacuations of the fæces and urine during the paroxysms were far from common. Hernia: But few children were credited with developing ruptures during their illness, viz., five with umbilical and two with inguinal herniæ. The frænal ulcer is doubtless responsible in some cases for the streaking of the sputa with bright blood. The congested and bloated face of severe pertussis is a well-known sight, and an illustration of the mechanical effects of the cough on the lax tissues of this part; but it is a feature of the disease which surprises by its presence rather than astonishes by its absence. Pains in the chest were complained of by five (1 per cent.), and pains in the abdomen by seven (1.5 per cent.). The abdominal pains were probably mechanical, secondary to the coughing (muscular). But the chest pains can be ascribed to the same cause (muscular) with less certainty. Pains in the throat in sequence to the cough affected one child, and pains in the legs and feet were complained of by two children. Pains in the head (headache) possibly of mechanical origin (impact) were specially noted in nine children (1.9 per cent.).

Otitis media.—Two among the out-patients complained of earache, and otorrhœa developed in five children, three of them being infants aged under twelve months.

Splenomegaly.—Four of these had broncho-pneumonia, and two of them were aged under one. The toxin of whooping-cough appears to have no selective action on the spleen. Splenic enlargement to a slight extent was found in only six of his out-patient cases.

Nervous complications.—Psychical disturbances appear to arise in some children, though quite exceptionally. Whether the toxin of pertussis can produce meningitis is a debatable point, and he narrated an example of optic neuritis and a possible meningitis arising in a boy aged two. He found in the 100 in-patients he had recorded, thirteen of them had convulsions. Of these thirteen children five were under two years of age. In every case the convulsions heralded death. One died of bronchitis, one of empyema, one of collapsed lungs with a dilated heart, four of broncho-pneumonia, two with tuberculous meningitis (one associated with general tuberculosis, the other with slight ordinary broncho-pneumonia), and four with tuberculosis of the lungs (two associated with general tuberculosis). What he found was that in such complications as he had indicated above convulsions were apt to occur. Further, that by the use of the customary remedial measures there might be a temporary recovery, perhaps of a few days, but mostly of a few hours only. However successful the remedies might prove to begin with, the child would subsequently pass into a state of unconsciousness, perhaps with a retracted head, interspersed with convulsive seizures suggesting the complication of tuberculous meningitis. However, this supposition was not warranted as his post-mortem examinations have demonstrated, and in only two instances have tuberculous meningitis been

discovered post-mortem. One of the children, an infant of fourteen months with broncho-pneumonia, was sitting up in its basket when it suddenly fell back blue in the face and motionless. It recovered from that by appropriate remedies, but convulsions soon followed and with a fatal termination. It would appear that in some cases the initial seizure is that of apnoea from spasm of the glottis—what the French call *convulsions internes*, and to which they accord considerable frequency. But of these 100 in-patients there was only one other child that lost her breath and had to be resuscitated by artificial respiration. She also was not convulsed.

Post-mortem observations.—Of the 100 in-patients here recorded no less than twenty-four died. The deaths occurred at the following ages: under 1 year one; under 2 years five; under 3 years six; under 4 years six; under 5 years one; under 6 years three; under 7 years one; and under 9 years one; total twenty-four. Of these deaths thirteen were from tuberculosis; five from broncho-pneumonia; two from lobar pneumonia, one of them displaying a mild colitis in the lower two-thirds of the colon; two from collapsed lungs; one from capillary bronchitis, and one from empyema. Seeing how large a number of children succumb to tuberculosis during the attack of whooping-cough, the prevention of lung complications, the toilette of the naso-pharynx, and the shutting off of all likely avenues of infection are obvious essentials. But the way to prevent the high mortality of pertussis, whether it be caused by ordinary lung disorders, or by collapse of the lungs and by dilatation of the bronchial tubes and cirrhosis of the organs with their associated cardiac complications, or by tuberculous disorders of the lungs and other parts, is to prevent whooping-cough. Therefore the prophylaxis of pertussis is the most important part of its treatment.

Mr. CLEMENT LUCAS showed a remarkable deformity of the chest as the result of whooping-cough in childhood. The patient at the age of four years had a bad attack of whooping-cough, which caused complete collapse of the lower lobes and falling in of the thoracic walls. The thorax above the nipples is fairly well developed, but a deep crease runs inwards from each axilla, crossing the nipple line and bounding the upper margin of the depressed portion.

Philadelphia Pediatric Society.

REGULAR Meeting, December the 8th, 1908, J. P. CROZER GRIFFITH, M.D., President.

Sporadic Cretinism.—Dr. S. A. S. METHENY showed one case and reported another. The first was a girl seen two months ago, then aged 12 months, with broad flat nose; thick, protruding tongue; scanty, coarse hair; ill-developed, badly-nourished body, the child being unable to sit up, and mentally dull. There is also internal strabismus. Marked improvement has followed thyroid treatment, the child gaining two pounds in the last two weeks, while one incisor is coming through. The second case was a boy, aged 14 months, in whom the improvement was even more marked.

Dr. A. H. DAVISSON said that in one of his cases of cretinism, in which

improvement had only progressed to a certain point, Dr. Fussell, who examined the child with him, considered that there was an element of mental deficiency in the case that explained the failure to obtain complete recovery. Dr. Davisson added that he had never seen complete recovery follow the use of thyroid extract.

Dr. JOHN SPEESE said that the transplantation of thyroid tissue has been followed by excellent results in the treatment of cretinism. This method is indicated especially when the drug administered by mouth causes gastro-intestinal derangement. Dr. Speese spoke of several cases operated upon by German surgeons with excellent results, and mentioned the investigations which are being made in the transplantation of thyroid tissue in the spleen and the epiphysial end of bones.

Dr. J. T. RUGH said that he had been struck by the very favourable results in the treatment of these two cases, as he had watched them with Dr. Metheny. He cited another case, seemingly an idiot, which has shown the most remarkable improvement upon thyroid extract and gives promise of practically normal development.

Dr. D. J. M. MILLER said that the treatment of these cases is usually not begun early enough, as the earlier the treatment the greater are the chances of permanent cure. If the diagnosis is made early the chance of a better result follows. But to make the diagnosis early is difficult; since most of the characteristic signs are absent at birth, it is important that we discover the earliest indications. As cases have recovered after years of treatment it is important to continue treatment for a long time; cases are reported showing complete recovery after ten years of treatment.

Dr. S. M. HAMILL said that in only one case had he seen the thyroid treatment carried out conscientiously through a period of years. In this instance the child was under practically constant treatment for a period of five years. During the first few months improvement was marked. After this progress was increasingly less satisfactory up to the end of the time that the patient passed from observation. Treatment was begun when the child was four or five years old, when he had not developed at all mentally. He was able to say a few words, which were difficult to understand. At the end of a year he could talk quite distinctly and connectedly, and was far enough advanced to be sent to school, where he progressed fairly well. On several occasions during the course of treatment, sometimes from the mother's inability to procure thyroid extract or from her desire to stop the treatment, the youngster went without the drug for some weeks. At the end of this time marked retrograde changes had occurred. It was never possible to give the remedy in as full doses as was desired, because any increase beyond a grain three times a day resulted in digestive disturbance. Dr. Hamill had had some experience with other cases, and he felt inclined to recommend the treatment by thyroid transplantation which had been referred to by Dr. Speese.

Dr. METHENY added that he feared these patients would no longer be brought to the dispensary after improvement became slower.

Sarcoma of the Naso-pharynx.—Dr. I. H. JONES showed a boy, aged 14 years, the left side of whose nose had always had some obstruction. At the age of five years it was noticed that the left side of the nose was more prominent than the right. In June, 1907, the left naris began to bleed. In September a polypoid growth was removed from well back in the nasal passage. In two weeks the growth had returned, and in three weeks an

attempt to remove it was prevented by excessive hæmorrhage. Two weeks later most, but not all, of the growth was removed, whereupon it again grew to a much larger size. In January, 1908, a mass the size of a walnut was removed from the left naris. Though the main part of the growth was in the left naris, the tumour was attached to the vault of the pharynx on the right side. On account of the bleeding two large pieces were removed in March, and in July a mass the size of a walnut was taken from the pharynx. By October the entire pharynx was filled, the mass extending down to the base of the tongue. Part of the growth in the naris was snared off in October by Dr. Kyle. In November Drs. Stout and Wharton operated again, removing the mass through the mouth and nose by snaring it off. The boy came through and is in fairly good condition, except for great anæmia, and an almost certain prospect of a rapid return of the tumour.

Dr. G. C. STOUT said that Dr. Wharton and he had assisted Dr. Jones in this last operation, which was simple, though the patient lost a great quantity of blood. The relief following was marked, but the anæmia resulting is very great.

Dr. L. J. HAMMOND has within the past week seen a case of sarcoma in a girl, aged 11 years, that is somewhat analogous to the one we have just seen, the malignancy being first discovered two years ago in the submaxillary gland on the left side. After the removal of this gland the condition remained unsymptomatic for eighteen months. The clinical picture at present shows extensive swelling over the entire left side of the jaw and cheek, the malignant mass protruding into the fauces and mouth, interfering with breathing and preventing mastication, as the mouth is held in a gaping position. Metastasis has already occurred in the spinal cord about the tenth dorsal vertebra, producing total paralysis in the legs and the organs supplied by the nerves below this point.

The Correction of Rotary Lateral Curvature.—Dr. W. G. ELMER showed a girl, aged 12 years, to illustrate some remarks on the application of force in the correction of rotary lateral curvature. She came to him in September, 1908, with a right dorsal left lumbar curve, with a deviation between the parallel lines touching the apex of each curve of $1\frac{1}{2}$ inches, and marked rotation in both dorsal and lumbar regions. This was shown by diagrams of the spine and photographs. Her treatment consisted in the application of a plaster jacket while she was lying prone upon a firm, flat surface and extension applied to the spine. Dr. Elmer described the apparatus which is used by him in the University Hospital, by means of which, with the assistance of a nurse, a jacket can be quickly and easily applied. Much better correction can be secured in this way than by the usual suspension method. There is almost complete muscular relaxation, whereas in the suspension method there is a certain amount of involuntary muscular resistance, and there is not enough pull in the weight of the lower limbs to properly straighten the spine.

The child was given general symmetrical and unilateral exercises daily in the gymnasium, the cast being removed for this purpose and afterwards replaced and firmly bandaged, every effort being made to restore the normal mobility of the spine. A new cast was applied with the extension apparatus every two weeks. At the end of two months a symmetrical cast was obtained. This was at once removed, used as a mould for liquid plaster, and a cast of the child's body obtained. A leather jacket was moulded upon this almost symmetrical torso. She removes this jacket for her daily exer-

cises, and has improved in every way. With her jacket on she is exactly two inches taller than she was two months ago, her figure symmetrical, and her spine straight. The rotation is entirely overcome while the jacket is worn, and the latter fits her body closely at every point. She was presented, not as a cured case, but to show what can be accomplished by the proper use of force in restoring a shortened, bent and twisted spine to its normal contour. The treatment would properly extend over two years before the patient could be called cured. The jacket should be worn a year, and the gymnastic treatment continued for the two years. Dr. Elmer showed a model spine in which he had reproduced the lateral curvature with the rotation which this child originally presented. By increasing the height of the spine two inches, he demonstrated the disappearance of both the lateral curves and the rotation as it had taken place in the child's spine.

Dr. T. A. O'HARA said that he had used as much force as he could, *i. e.* as much as the patient could stand without too much pain, in trying this method upon a recent advanced case which had previously had casts applied in this way several times, and the rotation disappeared perceptibly. Posterior rotation disappeared almost entirely. He considers this method a great improvement over the old suspension method.

Dr. RUGH said that the greatest success achieved is by the combined method of treatment, a fixed form of support being used along with developmental exercises. In cases past thirteen or fourteen years of age bony changes are much more likely, and when they have occurred but little correction is possible. In younger children, however, the results of persistent treatment are good. Dr. Rugh still favours suspension, but places the patient in such position as will best overcome the deformity, and then applies the cast. The earlier in the course of the deformity treatment is begun the better are the results, and fixation and exercises must be carried out until the patient is more than cured.

Dr. R. TAIT McKENZIE said that he would like to congratulate Dr. Elmer on the result achieved in this case. By continuing his treatment the ultimate result should be complete recovery. He also advised the use of suspension, together with lateral pressure. No matter how thoroughly these cases are corrected by jackets, persistent gymnastic exercises are necessary, even to over-correction. And they must be designed to affect the weakened muscles without producing too great general exhaustion. They should be continued until after all deformity has disappeared. The patient should report for several years at intervals after active treatment has ceased.

Dr. ELMER added that he had intended to emphasise the prone position, the value of which is to obtain general muscular relaxation, a condition impossible to get in suspension.

Congenital Heart Disease.—After reviewing the causes of congenital heart disease, Dr. W. N. BRADLEY described a case of a boy six weeks of age, with great cyanosis, who died of broncho-pneumonia soon after coming under observation. Autopsy showed small ventricles with a greatly dilated right auricle; foramen ovale large and patulous; the orifice of the pulmonary artery practically occluded. Branching off from the thick, dilated pulmonary artery was an anomalous vessel, replacing the ductus arteriosus, emptying into the under surface of the arch of the aorta.

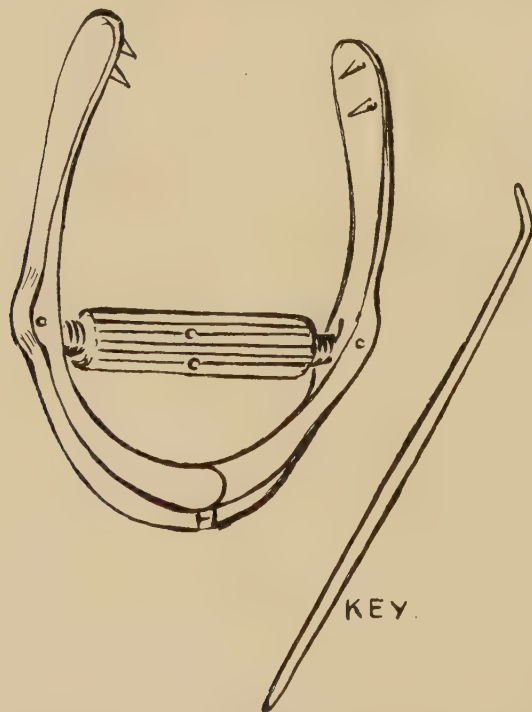
Congenital Obstruction of the Urethra.—Dr. JOHN SPEESE reported the autopsy findings in a child, born dead. There were enormous

bilateral hydronephrosis, hydro-ureter and dilated bladder. The prepuce was cedematous and slightly adherent to the glans, the meatus unobstructed. The anterior portion of the urethral canal was found normal, the prostatic portion pouched, and directly in front of the verumontanum a valve-like band was seen and recognised as the cause of the obstruction. Normal kidney structure was completely absent, the kidneys being transformed into thin-walled fibrous tissue.

Dr. DAVISSON said that he had never seen a case like the one just reported by Dr. Speese, but the fact that obstruction of the urethra in the new-born can occur is proved by the specimen.

Dr. MILLER said that two years ago he had shown to the Society a case of hydronephrosis, with enormous dilatation of the ureters, bladder and kidneys, in which no evidence of obstruction was found. That this is so in a large number of these cases is interesting. He thought that, in cases of this nature, the condition might be the result of spasm due to over-acid urine or other causes, just as pyloro-spasm occurs in infants from hyper-acidity and produces thickening of the pylorus.

Congenital Cleft Palate.—Dr. L. J. HAMMOND exhibited a new



instrument for approximating the palatine processes in cases of congenital cleft palate, consisting of two lateral plates, semi-oval, to conform to the shape of the lateral halves of the superior maxillary bone, fastened together in front by a hinge in order to prevent any play of the lateral half while being introduced. They are brought together by a central right and left

screw, which is so arranged as to bring together or separate the two lateral plates simultaneously. Sufficient force can be employed by this screw to bring together the palatine processes in any case where ossification is not a factor; and where it has advanced so far as to prevent it, an increased pressure kept up by tightening the screw will in a short time secure the same result. The fingers alone may be used to tighten the screw, or when in position the key which accompanies it can best be employed for this purpose. The two teeth, which are set posteriorly along the inner and upper edge of each lateral plate, are of two-fold value, keeping in position by their fixedness in the bony alveolus, and lessening the injury to the spongy alveolar tissue throughout its entire surface over which the lateral plates are applied.

Dr. J. H. McKEE asked how much discomfort the baby suffers, and how it affects the baby's health.

Dr. HAMMOND added that he used this instrument upon a child but two days old, now three months old, and throughout this period the nutrition and development have been quite in keeping with that of a normal child. He does not believe that the suffering from the instrument amounts to more than a dull ache, and this is confined posteriorly at the point where the teeth of the instrument are anchored.

Abstracts from Current Literature.

Medicine.

Congenital icterus (*Med. Press,* September 2, 1908).—At the Gesellschaft für innere Medizin of Vienna **Reuss** showed specimens from a case of congenital icterus. From the hepatic duct two branches passed into the liver, one ending in a *cul-de-sac* and the other being almost obliterated. The gall-bladder was abnormally small and contained clear fluid, but no outlet could be discovered, while the cystic duct and the bile-duct were quite obliterated. The liver itself was small and of a dark green colour, which under the microscope was found to be due to bile in the fibrous tissue. The cause of this malformation he presumed to be due to foetal inflammation, but as to the ætiology he would not hazard an opinion.

T. R. WHIPHAM.

The early diagnosis of measles (*La Semaine Med.,* January 8, 1908). **Aly-Belfadel**, after examining children who have been exposed to the contagion of measles before the appearance of the rash, states that the prodromal conjunctivitis differs from that of ordinary coryza. In the latter the injection of the mucous membrane usually begins at the *cul-de-sac* of the eyelids, whence it extends to the ocular and palpebral surfaces. In the early conjunctivitis of measles, however, the first sign of injection occurs on the bulbar conjunctiva on either side of the cornea, directly opposite the palpebral fissure. When seen early the redness is in the usual situation of pterygion, but spreads so rapidly that by the following day the whole mucous membrane of the eye is involved. This sign was found in over 70

per cent. of the cases examined, and so early that even a careful examination of the skin with a blue glass failed to reveal any trace of eruption.

T. R. WHIPHAM.

Dyspnœa and dysphagia due to enlarged thymus; recovery after partial removal (*Berlin. klin. Woch.*, April 27, 1908).—**Hinrichs** reports the case of a girl, aged 10 months, who was admitted for an extensive angioma of the ear. At about the fourth week respiration and deglutition became difficult, and on retracting the head a tongue-shaped tumour was forcibly propelled upwards at each expiration, slightly to the left of the supra-sternal notch. During inspiration the tumour could be felt behind the middle of the supra-sternal notch as a small transverse ridge, and there was dulness over the upper part of the manubrium. A large portion of the thymus was removed without an anæsthetic, with an immediate relief to respiration and deglutition. Part of the gland was left behind so as to avoid any influence on development. The portion removed weighed 92½ grains; it was abnormally vascular, but otherwise of normal structure. Dysphagia is an uncommon result of enlarged thymus, dyspnœa being usually the indication for operation. Some have attempted to treat the condition by intubation or tracheotomy, but the latter operation, according to Rehn, has been attended with a fatal result in each of the eight cases in which it has been tried. The writer advocates leaving a portion of the gland behind for the reason already given, and states that removal of the manubrium is preferable to excision of the entire gland as practised both by Purucker and Ehrhardt. Difficulty of deglutition in infants should suggest the possibility of an enlarged thymus even in the absence of stridor.

T. R. WHIPHAM.

A case of diphtheria associated with impetigo (*Lancet*, August 8, 1908).—**T. P. Puddicombe** describes the case of a boy, aged 8 years, who was admitted to hospital with a history of spots on the face for six days and sore throat for one day. There was slight congestion of the fauces and a patch of membrane on the right tonsil, slight nasal discharge, and four definite spots of impetigo on the upper lip with one on the chin. The temperature was 99° F. He did not appear ill, or complain of his throat. Four thousand units of anti-diphtheritic serum were given, and the case ran a normal course with the exception of the occurrence of an enlarged sub-maxillary gland at the end of the third week. The impetigo was cured in a week with ammoniated mercury ointment. Swabs were taken from the nose and throat, also two of the scabs were removed from the upper lip and a swab inoculated from the moist surface underneath. The culture from the impetigo spots gave the most abundant growth, and that from the nose very little. Bacilli resembling the Klebs-Loeffler organisms were found on microscopic examination in each case. Further investigation of the culture by the Lister Institute showed that the organism was really the Klebs-Loeffler bacillus of a virulent type. This case is of very great importance as indicating the possible connection between impetiginous lesions and diphtheria.

JAMES BURNET (Edinburgh).

Kidney lesions in the infant: clinical aspects (*Arch. of Pediat.*, vol. xxv, 1908, p. 330).—**J. M. Brady**.—A routine examination of the urine in infants is rarely made. In males the urine may be obtained by tying a rubber bag round the penis. In females a glass vessel may be placed over

the vulva and the bladder caused to contract by application of the cold hand. This is best done when the infant has been asleep for two or three hours. Though most frequently found in scarlet fever and diphtheria, nephritis may complicate whooping-cough, enteritis, dysentery, malaria, congenital syphilis, eczema, impetigo, burns, scabies, and, in fact, almost every disease. In 1887 Holt described a primary nephritis in infants. The symptoms are indefinite, and the condition is often unrecognised. The diagnosis of slight nephritis cannot be made during life with certainty, since clinically it cannot be distinguished from non-inflammatory degenerative changes, which are practically constant in infants suffering from infectious or non-infectious diseases. Fatal nephritis with anasarca may occur without casts or albumin having been present at any time in the urine, especially after scarlet fever, syphilis and tuberculosis.

J. D. ROLLESTON.

Lymphocytosis and leucopenia in diphtheria (*Arch. of Pediat.*, vol. xxv, 1908, p. 375).—**J. S. Wile.**—Leucocytosis occurs in 90 per cent. of all cases of diphtheria, and ranges from 15,000 to 75,000. It reaches its height within the first three days and diminishes as the toxæmia subsides. Progressively high leucocytosis is of bad omen. The leucocytosis is usually due to increase of the polymorphonuclears, but there may be a lymphocytosis instead. Sometimes lymphocytosis is accompanied by leucopenia instead of by leucocytosis. Leucopenia in diphtheria is usually regarded as a sign of low resistance, and the prognosis is still worse when the leucopenia is accompanied by lymphocytosis. The presence of myelocytes above 2 per cent. is a bad sign, whereas high eosinophilia is favourable. A child, aged 19 months, with diphtheria of the lip showed high lymphocytosis (89 per cent.) and leucopenia (6000). The average lymphocyte percentage and leucocytosis for a child of this age would have been 54 per cent. and 12,000 respectively. On the other hand, there was a daily increasing percentage of eosinophiles and a low myelocyte percentage (1·5—0 per cent.). Recovery was uneventful.

J. D. ROLLESTON.

Hyperpyrexia in measles (*Arch. de méd. des Enf.*, 1908, p. 259).—**Oddo and Sauvan.**—Hyperpyrexia is frequent in scarlet fever, but is less often found in measles, and in such cases is always due to some pulmonary or cerebral complication. The present case was that of a boy, aged 2 years. On the third day of the eruption, which was beginning to fade, the temperature suddenly shot up from 102·2° to 108·4° F. The child was very restless and delirious, and showed some stiffness of the neck muscles. Half an hour later the temperature fell to 102·4° F., and on the following day slowly descended to normal. In the absence of any other apparent complications, especially of any pulmonary localisation, the writers regard the pyrexia as probably due to stimulation of the nerve centres by the toxins of measles during defervescence and the resorption of the toxins.

J. D. ROLLESTON.

Ultero-membranous stomatitis (*La Pediatria*, 1907, p. 589).—**Giliberti** records the case of a boy, aged 4½ years, who developed ultero-membranous stomatitis in which Vincent's organisms were found. The anterior pillars and tonsils, especially on the right side, were also involved, but to a less extent. There was diffuse bronchitis and enteritis. The fever was high. Osteo-myelitis of the lower jaw set in, and death occurred. Concetti is quoted as having seen twelve cases of Vincent's stomatitis, four

of which died from necrosis of the jaw and subsequent septicæmia. Three of these patients were convalescent from measles and one from enteritis.

J. D. ROLLESTON.

Orchitis complicating mumps in a child (*Gaz. m'éd. de Nantes*, 1907; and *Arch. de méd. des Enf.*, p. 279, 1908).—**Grognot**.—On the eighth day of an attack of mumps a boy, aged 2 years, developed swelling of one testis. Three weeks later suppuration occurred which was treated by aspiration. Complete recovery took place. Bacteriological examination of the pus showed a pure culture of streptococci.

J. D. ROLLESTON.

Hæmaturia in German measles (*Gaz. degli Osp.*, 1908, No. 41, p. 439).—**F. Bambace**.—In a recent epidemic of rubella all the cases showed slight albuminuria. After its complete disappearance a fairly pronounced hæmaturia supervened, which lasted for two or three weeks in spite of treatment.

J. D. ROLLESTON.

Vaccinia of buccal and faucial mucosæ (*Wien. med. Wochens.*, 1908, p. 1233).—**H. Marschik**.—Vaccinia of the mouth and throat, like that of the skin, runs an acute and typical course, is little affected by treatment, and owing to its rarity is readily mistaken for other conditions, especially diphtheria, from which it can be diagnosed by an absence of a tendency to spread. Marschik records three cases which occurred during the Vienna epidemic of smallpox in 1907. (1) Vaccinia of the tongue in a man, aged 23 years. There was fever and painful swelling of the organ. Gumma was first suspected. There was no history of infection. (2) Vaccinia of the upper lip, tongue and right tonsil in a woman, aged 30 years. The lesion on the lip was first regarded as a boil and then as herpes, while the faucial condition first resembled quinsy and then diphtheria, for which reason antitoxin was given. For a few days there was high fever, difficulty in swallowing, breathing and speaking. The patient had been infected by putting into her mouth the hands of her children, who had recently been scratching their vaccination pustules. (3) Vaccinia of the tongue in a woman, aged 50 years, who had recently been in contact with some inoculated calves.

J. D. ROLLESTON.

Diphtheria in Berlin (*Berl. klin. Wochens.*, 1908, pp. 1257 and 1319).—**A. Baginsky**.—In pre-antitoxin years the diphtheria mortality in the children's hospital was never less than 40 per cent. and was usually about 50 per cent. During the 1907 epidemic there were 529 discharges and deaths with a mortality of 11·9 per cent. The epidemic was not a mild one, since 406 of the cases showed some degree of severity. Thirty-eight of the 63 fatal cases were either moribund on admission or owed their death to some secondary disease, *e.g.* tuberculosis or scarlet fever, or to some late complication, *e.g.* hæmorrhage from the tracheal wound or paralysis. The great majority of the cases (125) were between 2 and 4 years, 89 were found in the first 2 years and 16 between 12 and 14 years. The mortality was 32·2 per cent. in the first year, 20·7 per cent. in the second, 17·6 per cent. between 2 and 4 years, 6·9 per cent. between 4 and 6 years, 4·8 per cent. between 10 and 12 years, while of 16 patients between the ages of 12 and 14 years none died. There were 110 laryngeal cases; 32 died, a mortality of 29 per cent. No case which was not laryngeal on admission developed laryngeal symptoms subsequently—a further proof of the value of serum.

Intubation was performed on 82 and tracheotomy on 24, with a mortality of 2.4 and 50 per cent. respectively. Secondary tracheotomy was performed on 25, with a mortality of 68 per cent. Unlike his English and American colleagues Baginsky does not believe in the value of large doses of anti-toxin, and never gives more than 4000-5000 units at a time. He has not observed any advantages from the use of serum in paralysis.

J. D. ROLLESTON.

Hyperpyrexia in whooping-cough (*Arch. de méd. des Enf.*, 1908, p. 262).—**S. Veras**.—A boy, aged 11 months, who had been suffering from whooping-cough for a fortnight, suddenly developed a temperature of 100.4° F. The paroxysms became more frequent, and were accompanied by green diarrhoea. The next day convulsions occurred, and continued in spite of treatment until death, which took place on the following day. The temperature records on that day were as follows: 1.15 p.m., 104° F.; 2 p.m., 105.8° F.; 3.25 p.m., 108.3° F.; 4 p.m., 109.7° F.; 4.40 p.m., *i.e.* immediately after death, 109.5° F. An explanation of the hyperpyrexia is not given.

J. D. ROLLESTON.

Appendicitis in infectious disease (*Journ. des praticiens*, 1908, p. 257).—**Hutinel**.—In every general infection, such as scarlet fever, measles, influenza, pneumonia, or local infection, such as entero-colitis or peritonitis, the appendix runs a risk of being affected, especially if it has already suffered. It is important to bear in mind the existence of these appendicular reactions and to realise that they do not all require the same treatment. In some medical measures are sufficient, while others require early surgical intervention. Hutinel records three cases of measles, in two of which the symptoms of appendicitis developed just before the appearance of the eruption, and disappeared shortly afterwards without operation. In the third case an appendicular abscess formed, and was evacuated.

J. D. ROLLESTON.

Diphtheria in Stettin (*Berlin. klin. Wochens.*, 1908, p. 1094).—**Gabriel**.—From April, 1906, to April, 1907, 541 cases were admitted to the municipal hospital at Stettin; 80 died, a mortality of 14.6 per cent. The importance of the early administration of serum is illustrated by the fact that among sixteen fatal cases of cardiac paralysis the average date of injection was the fifth day, whereas of the cases that recovered the average date of injection was the third day. Acting on the hypothesis that after the acute infection toxones were still being poured into the blood, Gabriel injected each case admitted later than the second day with 3000 to 5000 units daily until their discharge from hospital, *i.e.* during a period of four to six weeks. The serum was injected into the gluteal muscles in each case. In an examination of 500 cases Gabriel found that diphtheria bacilli had disappeared from the throat after the second week in 22.7 per cent., after the third week in 51.5 per cent., after the fourth in 82.5 per cent., and after the fifth in 96.2 per cent. In some cases their persistence was longer, *e.g.* 56, 57, 87, 96 and 97 days, and in one case six months (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1907, p. 454).

J. D. ROLLESTON.

Congenital pneumonia (*Thèses de Paris*, 1907-1908, No. 359).—**H. Murit** could find only nineteen examples of this rare condition in literature. In almost every case the mother herself was suffering from pneumonia. Congenital pneumonia occurs principally in the last two months of

pregnancy. It has a special predilection for the base of the lung. It may be double, but is more frequently confined to the right lung. The passage of the pneumococcus into the blood may give rise to a general infection without any local inflammatory determination, so that the transmission can be recognised only by bacteriological examination. Foetal pneumonia is invariably fatal to the child within two to six days. In half of the cases the mother died also.

J. D. ROLLESTON.

Bell's palsy in an infant, aged 3 months (*Arch. of Pediat.*, 1908, p. 446).—**J. C. Gittings**.—The patient was a female twin, hand fed, who had suffered from indigestion and loss of weight. Three months before admission a purulent discharge from the right ear was noted following acute coryza. On admission typical right faucial palsy was present. The right ear showed acute otitis media with granulations in the tympanic cavity and foul muco-purulent discharge. Death took place from bronchopneumonia. There was no autopsy. (*Cf. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1906, p. 557.)

J. D. ROLLESTON.

Tuberculous infection through milk (*Pediatrics*, 1908, p. 422).—**G. C. Schroeder**, in criticising the arguments against the inter-transmissibility of human and bovine tuberculosis, says that no specific difference has been found between human and bovine tubercle bacilli, though it has been constantly proved that the bacilli from these two sources differ greatly in virulence, and that the bovine tubercle bacilli are almost constantly the more virulent. Morphological, biological and bio-chemical tests to determine the source of infection are of doubtful value, since the morphology and virulence of tubercle bacilli can be greatly modified by cultural methods and by passage through animals. All milk intended for food should, therefore, be obtained from undoubtedly healthy cows or should be pasteurised or sterilised before use.

J. D. ROLLESTON.

Carbohydrate incapacity in children (*Arch. of Pediat.*, vol. xxv, 1908, p. 203).—**C. G. Kerley** thinks that the consumption of large quantities of sugar is one of the great dietetic errors of the day. The administration of free sugar is unnecessary since the organism can convert all the sugar it needs from the starch taken in the average mixed diet. The commonest sign of sugar incapacity in infants is regurgitation between the feeds. This is most likely to occur with cane sugar, less so with maltose, and least of all with milk sugar. Irritability, scalding urine and eczema are also frequent signs of sugar excess in infants. Recurrent rhinitis, tonsillitis and bronchitis are seen most frequently in sugar susceptibles. Maltose incapacity is shown by regurgitation, vomiting, and loose stools. In infants and older children starch incapacity or excess is not infrequently the cause of constipation. Colic and abdominal disturbance are rarely due to this cause.

J. D. ROLLESTON.

Congenital biliary cirrhosis (*Arch. of Pediat.*, vol. xxv, 1908, p. 173).—**J. P. Crozer Griffith** records the second case which has come under his observation (abstract of first case in *BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1906, p. 80). A boy, aged 5 months, was admitted to hospital on December 2, 1906, and died on January 1, 1907. Jaundice had been present from birth, at which he weighed twelve pounds. Since then he had wasted. On admission the child showed intense jaundice,

several purpuric spots on the scalp, and enlargement of the liver and spleen. There was no vomiting or diarrhoea, but the motions after the first day in hospital became white, and remained so. A few fresh purpuric spots developed. Jaundice increased, and the urine collected just before death showed much bile and a trace of albumin. The weight at death was 7 lb. 14 oz. At the autopsy the liver was found larger than normal and of a deep yellowish-green colour. The cut surface was granular, numerous connective-tissue striæ running through it. The gall-bladder was empty. The cystic duct was obliterated. It was impossible to follow out the common bile-duct. Histologically there was found extensive increase of the peri-portal connective tissue and great multiplication of the bile-ducts. The spleen showed moderate hyperplasia of the lymphoid elements with special richness of the pulp in blood and blood pigment.

J. D. ROLLESTON.

Kernig's sign in infancy (*Arch. of Pediat.*, vol. xxv, 1908, p. 167).—**J. L. Morse** examined 2000 children under two years of age, and arrived at the following conclusions: Kernig's sign is almost never found in infancy, either in health or disease, except in meningitis. It is found so rarely in other diseases at this age that its presence in an acute disease justifies, as far as any one sign can, the diagnosis of meningitis. It is never present, however, in some cases, and in many others it is present only intermittently. It occurs with equal frequency at all stages of the disease. It has no apparent connection with the degree of intra-cranial pressure. It is more often present when the knee-jerk is increased than when it is diminished. It is of no value in the diagnosis between the tuberculous and cerebro-spinal forms.

J. D. ROLLESTON.

Acute meningitis of the convexity (*Arch. of Pediat.*, vol. xxv, 1908, p. 207).—**J. Hemenway** records two cases. The first was in a girl, aged 20 months. The symptoms were coma, twitchings, strabismus, nystagmus, vomiting and diarrhoea. There was no bulging of the fontanelle, and the pulse and respiration were regular. Opisthotonos and Kernig's sign were absent. The discs were normal. The cerebro-spinal fluid was clear and sterile. Broncho-pneumonia developed in the third week, but soon cleared up. Death took place from exhaustion on the seventy-third day, preceded by a fresh attack of broncho-pneumonia. The autopsy showed purulent meningitis of the superior and lateral aspects of the parietal and frontal lobes, most marked on the left side. The brain substance was normal. Broncho-pneumonia was present in the left lower lobe. A pure culture of the pneumococcus was obtained from the meningeal exudation and the lung. During life the diagnosis of cerebro-spinal meningitis, acute enterocolitis with nervous symptoms, and general tuberculosis was successively made. The second case was a girl, aged 17 months, whose clinical history closely resembled that of the first case, but the broncho-pneumonia was less severe. Recovery took place, but the child was left mentally defective.

J. D. ROLLESTON.

Chylothorax in a child (*Arch. of Pediat.*, vol. xxv, 1908, p. 195).—**C. G. Jennings** and **H. M. Rich**.—A child, aged 9 months, suffered from rapid and difficult respiration. Milky fluid was found in the right pleural cavity. In the course of sixteen months thoracentesis was performed eighteen times, an average of twenty-four ounces being removed on each

occasion. The reaction of the fluid was alkaline, the specific gravity 1008 to 1020. Fats varied from 3 to 4 per cent. and proteids from 5 to 8 per cent. No sugar was found. Microscopically the fat was seen in a fine state of emulsion. During the first six months the temperature ranged from 99° to 100·6° F., and then became normal. J. D. ROLLESTON.

Influenza in children (*'Pediatrics,' March, 1908, p. 145*).—**A. F. Brugman**.—Influenza in children is usually a much milder disease than in the adult. Breast-fed children are rarely attacked, but the bottle-fed are more susceptible. Brugman divides the cases into (1) those in which the upper respiratory tract is affected. These are comparatively mild, and often resemble measles. Otitis media and mastoiditis may supervene. (2) Those in which the lower respiratory passages are mainly involved. The symptoms are more severe. Lobar or broncho-pneumonia is very liable to develop. Prostration is marked and convalescence tedious. (3) Gastro-intestinal forms, found usually in bottle-fed children or in older children who have been improperly fed. The prognosis is good in healthy children, in whom the attack is usually mild. Poorly nourished, and especially rickety children, are more liable to develop fatal ear, lung or glandular complications.

J. D. ROLLESTON.

Chickenpox complicated with gangrenous erysipelas (*'Post-graduate,' May, 1908*).—**Watson** relates the case of a boy, aged 5 years, who two days after the onset of erysipelas began to complain of pain in the right groin; the next day an erythematous patch appeared and spread to the abdomen and scrotum, which was swollen to three times its size; blebs also appeared and the temperature rose to 102° F., and the child was restless and looked ill. Ten days later pus appeared beneath the skin of the scrotum, and an adjacent area became gangrenous. The child also became delirious. The sloughs were removed, and after a long illness the patient eventually recovered.

J. PORTER PARKINSON.

Mouth-breathing (*'Canadian Journ. of Med. and Surg.,' June, 1908*).—**Hunter** states that in 10 per cent. of school children there is more or less obstruction in the nares or pharynx, and this, if permanent, leads to mouth-breathing. This produces the following: (1) The alveolar process of the upper jaw grows downward. (2) The tension of the muscles forces the posterior extremities of the upper jaw inward. (3) The upper incisor teeth are crowded forward. (4) The palatal arch is raised. (5) Pigeon breast is produced. (6) Hearing is impaired. Besides this the facial expression and symmetry are impaired. The patient becomes anæmic, and the resistance to pathogenic micro-organisms is much lowered, while the cold air coming in contact with the respiratory mucous membrane produces more or less shock with altered vascularity and subsequent hypertrophy. The writer also considers that the psychic functions may be perturbed by the same cause, and the removal of the obstruction alter a disobedient, immoral youth into a brilliant, exemplary student, "who may in due time become a self-sacrificing medical missionary."

J. PORTER PARKINSON.

Tracheo-bronchial adenopathy and paralysis of the recurrent nerve (*'l'Echo Med. du Nord,' April, 1908*).—**Delearde** and **Hannart** report the case of a boy, aged 16 months, who had suffered from stridor for three months. The child was the subject of congenital syphilis, and had

suffered from whooping-cough at the age of six months. When the infant was six months old he had convulsions, and slight stridor was noticed which had since increased. On examination there was marked stridor, cyanosis, and enlargement of the veins of the neck. Ordinary examination of the child revealed nothing abnormal, but radioscopically there was seen a rounded shadow in the mediastinum in the position of the bronchial glands. Laryngoscopic examination of the vocal cords was impossible, but the conditions of the surrounding parts pointed to their being healthy. It was considered that there was paralysis of the left vocal cord from pressure on the recurrent laryngeal nerve. Anti-syphilitic treatment was begun, but the infant died shortly from vomiting and diarrhoea. At the autopsy the left group of tracheo-bronchial glands was found enlarged but not caseous. There was also some enlargement of the abdominal glands. The lungs were healthy. It was difficult to say whether the enlargement was simple, tuberculous, or syphilitic. Inoculation into a guinea-pig produced no tuberculous lesions, and the trypanosome could not be demonstrated in the liver though the child had obvious congenital syphilis, and it was probable that this was the cause of the trouble.

J. PORTER PARKINSON.

Two case reports (*Montreal Med. Journ.*, April, 1908).—**Mackay** reports some interesting cases. *Dermatitis exfoliativa neonatorum*: A child, born healthy, with no history of syphilis, began to peel at the neck, and in a day or two almost the whole of the epidermis disappeared from most of the trunk and face, and on the arms and legs was a patchy, erythematous rash. There was no fever, and the infant took food well and did not lose weight. The process of desquamation lasted seven days and the epidermis was restored, leaving no scars. *The hæmorrhagic disease of infants*: A male infant, weighing twelve pounds, began to be restless about sixteen hours after birth. The abdomen became distended, and hæmorrhagic patches appeared on the back. The child vomited blood and passed blood-stained motions by the bowel. Pallor and profound weakness ensued, and the child died twenty-four hours after birth. There was no jaundice, no signs of infection, and syphilis could be excluded.

J. PORTER PARKINSON.

Stenosis of the pylorus in infancy (*Canad. Pract. and Rev.*, August, 1908).—**Scudder** reports four cases operated upon, all of which recovered. Posterior gastro-enterostomy was the operation performed in all cases. The ages of the infants were respectively—14 days, 24 days, 22 days and 25 days. The operation was done as soon as the diagnosis was made. The good health and apparent good nutrition of the babies after operation leads one to suppose that nutrition remains normal.

J. PORTER PARKINSON.

Chronic pulmonary œdema, anasarca and anæmia of neurotrophic origin in an infant (*La Pediat.*, March, 1908, p. 180).—**G. A. Petrone** reports the case of a male, aged 11 months. Eight days after birth œdema limited to the feet was noticed, which lasted some months; otherwise the child seemed well. At three months pallor was noticed, which kept on increasing. There was a history of an attack of fever and vomiting with œdema of the legs, hands and face a month before admission. Examination showed dulness and fine mucous râles at both bases, slight enlargement of liver, pallor, and more or less general œdema. There was polynuclear leucopenia. A faint trace of albumin in the urine. Death occurred four weeks later. The autopsy showed anæmia of all the organs,

chronic œdema of lungs, slight fatty degeneration of liver and kidneys. In discussing the pathology of this case the author excludes cardiac or renal origin, because apart from anæmia these organs were healthy; nor does he admit that the anasarca was dependent on the anæmia, because it commenced soon after birth, and because of the disproportion between the two as cause and effect. For the same reason a toxæmic origin must be excluded. He is obliged to fall back on a nervous origin, and places the case in the category of the trophœdema described by Meige and others. In no case, however, has œdema localised to the lungs been recorded as in this. It is also noteworthy that in this case the cutaneous œdema began two months before death, and that, at first localised to the extremities of the limbs and face, it afterwards became general. Trophœdema is sometimes seen as an hereditary affection, sometimes occurring in only one member of a family as in this case; it may be congenital, but is more often acquired about the age of puberty. In this case, although the pulmonary œdema had existed for some time, a congenital origin cannot be admitted, because the infant, after the disappearance of the early œdema of the limbs during the first month of life, remained for some time comparatively well, which would be incompatible with an œdematous affection of both lungs. Trophœdema when once established does not, as a rule, retrocede, and when localised to the limbs does not disturb the general health; in this case, however, the early œdema did retrocede and the special localisation in the lungs caused the death of the infant. The author rejects the theory of Long, of an abnormal development of the middle layer of the blastoderm, and that of Domenici, of a vascular change left by a foetal inflammation. Neither does he share the opinion of Meige; that of a change in special trophic centres, nor that of Vallobra, of lymphatic hypersecretion due to lesions of special secretory centres, nor that of Unna, of a venous spasm. He puts forward two hypotheses; one, that of a lesion of special trophic centres which preside over the nutrition of the blood-vessels, producing a change in the walls of the capillaries with increase of their permeability and transudation of lymph; the other, which admits an obstructed flow of lymph by spasm of the lymphatic vessels due to a lesion of the respective vaso-motor centres.

VINCENT DICKINSON.

The nutritive value of homogenised milk (*La Clin. Infant.*, June, 1908, No. 12, p. 360).—**H. Bouquet**.—The principle of homogenisation consists in making the milk under high pressure spurt through a nozzle pierced with very fine holes; on issuing from this it is atomised against a conical agate valve. The fat globules are thus pulverised at the point of issue, having a diameter of two to three thousandths of a millimetre. The ascensional force of these globules, being proportionate to the cube of their radii, is thus practically annihilated. The coagulum found in such milk with hydrochloric acid is light, porous, friable and easily permeable to the digestive juices, and quite different from the firm homogeneous clot obtained under similar conditions with cow's milk, either fresh or sterilised by the ordinary methods. This coagulum, in short, bears a remarkable resemblance to that obtained from human milk. When this milk was administered to infants suffering from digestive troubles, one of the first results obtained was that in twenty-four hours the stools became healthy and natural in amount and lost their disagreeable odour. Vomiting ceased and the body-weight increased.

VINCENT DICKINSON.

Case of congenital aortic stenosis (*Lyon Médical*, June, 1908, No. 24, p. 1274).—**E. Weill** and **G. Mouriquand** publish this case of an infant aged $5\frac{1}{2}$ months, without any direct tubercular or specific hereditary antecedents. There was a marked thrill over the præcordial region, systolic in rhythm, and most intense at the apex; a bruit at the apex conducted but a little way towards the axilla and not at all into the vessels of the neck; its intensity was more marked to the left than to the right of the sternum, and was but faintly audible in the back. Radioscopy showed hypertrophy of the left ventricle. Functional symptoms were little marked; there was no habitual cyanosis, but sometimes on drinking there was an attack of dyspnoea with cyanosis. The autopsy showed persistence of the arterial duct connecting the aorta with the main trunk of the pulmonary artery; the aortic valves were the seat of marked thickening, being almost cartilaginous, retracted on themselves and attached by their extremities, the orifice measuring 3.5 cm., while the pulmonary orifice was 4.1. The occlusion of Botal's ring was complete. There was no interventricular communication.

VINCENT DICKINSON.

Pathology.

The physiological consequences of inequality in the mammary glands (*La Clin. Infant.*, August, 1908, No. 16, p. 481).—**Variot** and **Lassablière** examined 550 wet-nurses at the Hôpital des Enfants-Assistés, and found a difference in volume of the two breasts in 419. Predominance of the left breast was noticed in 51 per cent., of the right in 25 per cent., equality in 24 per cent. The average excess in volume was 1.9 for the left breast and 1.4 for the right. The difference in volume of the breasts had a direct effect on the secretion of milk, particularly on its quantity and composition, which vary in each breast. When the inequality was marked the gland tissue in the smaller seemed atrophied, and only able to furnish an amount of milk relatively smaller in proportion to the other breast, which was hypertrophied. Thus in 40 instances the quantity of milk contained in each of the two breasts varied, according to the difference in volume, between 46 c.c. and 335 c.c. of milk. In 17 instances analysis was made separately of the milk from each breast, and it was found that the chemical composition varied, and was most marked in proportion to the unequal development of the breasts. The variation was most marked in the case of fat, amounting to 52, 61, 93, and even 120 per cent. in extreme cases. With regard to sugar, it amounted to a diminution of 57 to 50 per cent., and with regard to casein, to an increase from 2 to 5 per cent. The habitual predominance of volume of the left breast seemed due to the fact that the wet-nurses, for reasons of convenience or habit, suckled more often with this side, and the secretion became more feeble in the other on account of suction being less frequent and prolonged. Asymmetry of the mammary glands is probably transmissible by heredity. To remedy this condition the infant should be suckled first from the smaller breast.

VINCENT DICKINSON.

Dwarfism and mitral stenosis (*La Presse Médicale*, August, 1908, No. 63, p. 497).—**M. Labbé** describes a case and enters into an interesting discussion on the subject. He asks whether the mitral lesion is primary and causes the dwarfism, or whether both conditions are the result of

the same *dystrophic* and *hypotrophic* cause. These two theories have their adherents: (1) Maurice Raynaud was the first to admit that mitral stenosis might cause dwarfism. There is a class of dwarfs who have none of the deformities of myxœdematous achondroplasia, but are like small, well-formed men. On account of the smallness of the heart and vessels the blood is distributed in less quantity to the tissues, which therefore develop slowly and imperfectly. This constitutes an angioplastic dwarfism. At the time of puberty the organism undergoes a trophic stimulus, but owing to the circulatory failure growth is irregular, and a number of infantile characteristics persist. In favour of this theory is the fact that a cardiac lesion, not congenital, but acquired, as the result of a rheumatic endocarditis in a child, prevents its development; *à fortiori* much more will a congenital lesion cause dwarfism. The relations which exist between the development of the mitral orifice and that of the organism explain certain clinical peculiarities of congenital mitral stenosis, and especially why it does not come into prominence before puberty, and why it is better tolerated than the acquired lesion. Mitral lesions show themselves clinically by symptoms of functional insufficiency. During the first years of life the heart with congenital mitral stenosis can fulfil its functions; it is small, and sends into the circulation a small quantity of blood at each systole, but the organism does not suffer since it is itself imperfectly developed. At the time of puberty, with the development of the organism there is increased activity of nutrition, and if the heart is unable to keep pace with the development of the body the equilibrium is disturbed and the mitral stenosis shows itself. It is then that the hypotrophic influence of the lesion intervenes in order to hinder the development of the organism and maintain the equilibrium. In a word, dwarfism may be considered a phenomenon of compensation which retards the fatal result of asystole. But it is not so when mitral stenosis supervenes in a grown-up person; here adaptation can no longer take place and cardiopathy soon ensues. (2) The second theory is that of Gilbert, who saw in mitral stenosis and hypoplasia lesions of the same kind, simultaneous and not consequent, resulting from an arrest of development. We now know that hereditary syphilis and tubercle are two great causes of mitral stenosis, and also that these two infections are essentially hypotrophic and that many cases of dwarfism are due to them. We are then tempted to refer dwarfism to syphilis or tuberculosis without the dystrophic intervention of cardiopathy, and to assert that the infection has been the cause at the same time of mitral dwarfism, cardiac and vascular, and of the dwarfism of the dental apparatus and of the body. In order to affirm that in certain cases dwarfism is the result of the cardiac lesion and not of a general dystrophic disease, this dwarfism of cardiac origin should have characters which distinguish it from dwarfism of syphilitic origin, and this has not as yet been demonstrated.

VINCENT DICKINSON.

Disturbances caused by pap food (bread boiled in water) (*La Clin. Infant.*, August, 1908, No. 15, p. 450).—G. Variot and P. Lassablière fed young dogs on pap for three months, with the result that: (1) Animals so fed were very inferior in weight and size to control animals fed on bread and milk; (2) the inequality and delay in their increase of weight was far in excess of that of their increase of stature, the former being 34 to 60 per cent. and the latter 68 to 96 per cent. in comparison with control animals; (3) some dogs died of broncho-pneumonia, others were in bad condition;

a return to milk diet was followed by marked improvement. The experiments show that pap food, such as is commonly used among the poor, is an aliment very inefficient for the development and health of young organisms. It also reveals this interesting physiological fact, that in the course of growth each tissue has a special independent nutritive activity and grows on its own account, since the stature due to the bones is relatively less delayed than the weight.

VINCENT DICKINSON.

Primary tuberculosis of the mesenteric glands ('*Amer. Journ. of the Med. Sciences*, August, 1908).—Hess states in a review of this subject that of the published cases in which the type of organism had been determined over 60 per cent. were due to the bovine form of the tubercle bacillus. In children infections with the bovine type formed by far the greater number, while amongst adults the human form predominated. The author believes that the greater frequency with which children are infected is to be attributed, not merely to greater exposure in childhood, but in all probability to a feebler natural resistance manifesting itself in a greater permeability of the intestine, or by want of protective power in the lymphatic glands. On the other hand he suggests that possibly adults may acquire an immunity towards the bovine type of the bacillus. With regard to the lesions produced by the two forms no pathological or clinical difference can be made out. The presence of caseation or calcification bears no relation, as some have held, to the type of infecting organism.

T. R. WHIPHAM.

Therapeutics.

Red light in the treatment of measles ('*La Presse Médicale*, August, 1908, No. 63, p. 500).—F. Simonescu calls attention to the favourable action of red light on the evolution of measles and its complications, especially broncho-pneumonia and hyperpyrexia. There is no need of costly installations like that of photo-therapy after Finsen's method. A simple room, painted red, with windows and furniture of the same colour, is sufficient to render effectual service, or, lacking this, merely covering the windows with large red curtains and having a lamp with a red glass burning in a corner. Probably the morbillous agent and its toxin lose their pathogenic properties very rapidly under the influence of red light. It acts differently to the way a serum acts, having an intense abortive action rather than a curative. The patient in this case is under the influence of a simple febrile state which quickly disappears. Broncho-pneumonia is not only benefited by the red light but cured. The idea is that the pulmonary complications are produced by the same eruption which is localised on the tissues and on the pulmonary parenchyma.

VINCENT DICKINSON.

Otology, Laryngology, and Rhinology.

The more important germs found in aural discharge ('*Canadian Journ. of Med. and Surg.*, August, 1908).—Royce states that the admixture of germs that is usually obtained from aural discharges may be lessened by taking the more recent cases only, and by thorough irrigation of the canal, after which the smear is taken from the pus as it issues from the opening in the tympanic membrane. The most important germ found is the *Streptococcus pyogenes*, for it is found alone or combined in all the cases of a

fulminant type. When it is mixed with other germs such as the pneumococcus, the staphylococcus, or the spirillum of Vincent, the cases show special malignancy. **Deunch** showed that 86 per cent. of pure streptococcus cases came to operation, and when mixed with other organisms 90 per cent. In some cases the *Streptococcus mucosus capsulatus* is the ætiological factor; this appears singly, in pairs or chains, stains with aniline dyes and Gram's method. It is non-motile and does not form spores. It grows best in Loeffler's solidified blood-serum. When the pneumococcus appears in pure culture the cases are usually mild, but when it is associated with the streptococcus unusual malignancy is noted.

J. PORTER PARKINSON.

Surgery.

Gonorrhœa in children (*Arch. of Pediat.*, 1908, p. 547).—**J. Merrill**, at a symposium of the Chicago Pædiatric Society, traced the history of epidemics of gonorrhœa in children. **G. H. Weaver** dealt with the pathological aspects. In children an intermediate carrier is usually responsible, except in ophthalmia, where infection takes place during birth. Females are most attacked owing to the susceptibility of the urethral and vaginal mucous membranes in young girls. Children from two to five years are most susceptible. An attack of scarlet fever renders subsequent infection particularly easy. In girls the urethra is probably first involved in most cases, but the vagina is invaded early, and infection spreads from the cervix to the uterus, tubes and peritoneal cavity. The acute process is soon over, but a subacute or chronic process may persist, and probably be connected with mal-development of the sexual organs in later life. **W. J. Butler** and **R. Vail** recommended vaccine-therapy as superior to any other method of treatment.

J. D. ROLLESTON.

Erysipelas treated by streptococcus vaccine (*Arch. of Pediat.*, July, 1908, p. 527).—**J. H. Borden**.—A female child, aged 24 days, received a scratch on the tip of the nose. Two days later erysipelas developed, and involved the entire nose, upper lip, and both cheeks, whence it spread to the forehead, covered the scalp, and reached down to the shoulders behind and over the chest to the nipples in front. One hundred and sixteen hours from the onset 3,000,000 dead streptococci were injected into the thigh muscles. Temperature before injection 103° F., three hours later 104·9°. Twenty hours after the injection the temperature was lower than it had been for three days, and the face had entirely cleared up. A second injection of 4,000,000 streptococci was then given. After a slight rise the temperature fell to normal within thirty-six hours. Further recovery was uneventful.

J. D. ROLLESTON.

Patent urachus in a child, aged 4 years (*Pædiatrics*, 1908, p. 356).—**J. F. Erdmann**.—The patient was a healthy boy with normal genitals. The umbilicus showed a mushroom-like eversion with a crater-like centre surrounding a small opening from which urine leaked, or was sometimes ejected in a stream four to twelve inches in height. At times a fairly good stream was passed by the urethra. On opening the abdomen the urachus was found to be three quarters of an inch wide and three inches long. The umbilicus with about an inch of the urachus was excised. A catheter was kept in the bladder for three days and subsequently micturition was normal.

J. D. ROLLESTON.

Reviews of Books.

TRANSACTIONS OF THE SECOND INTERNATIONAL CONGRESS ON SCHOOL HYGIENE. London, 1907. Edited by JAMES KERR, M.A., M.D., D.P.H., and E. WHITE WALLIS, F.S.S.

THE three stout volumes of valuable matter which so fittingly follow the successful Congress held in August, 1907, will form a lasting monument of the arduous labours so efficiently carried out by Dr. Kerr and Mr. Wallis. The ordinary adherent of a scientific congress, or even the officers of such a gathering, attends the closing meeting with the feeling that all work is ended, and he lays aside his responsibilities with his badge. But for the secretaries the work is but half begun. Organisation and the realisation of a successful meeting are, to some extent, rendered easier by the willing help of other officers and members of committees, but when the Congress is concluded and the helpers have dispersed, the secretaries have their most difficult task before them, namely, the collection and arrangement of papers into a uniform volume of transactions. This is the most arduous and wearying duty of all, for readers of papers are notoriously difficult to manage, and proofs are delayed in return until editors are driven to the verge of distraction. Dr. Kerr and Mr. Wallis have done their work with a method which is beyond praise. They have collected and arranged the enormous mass of material in so orderly a manner that the reader can place a finger upon any particular paper or resolution in the readiest manner possible. In vol. i will be found the business part of the proceedings, the officers, opening ceremony, inaugural address, and closing meeting. The lectures and set discussions come next, and these are followed by detailed reports of Sections 1, 5, 10, and 11. In vol. ii the reports of Sections 2, 7, 8, and 9, with the lectures and set discussions which relate to the work of these Sections, are placed; whilst vol. iii contains the reports of Sections 3, 4, and 6, together with an appendix, comprising committee and council lists, lists of members and delegates, awards, statements of accounts, and a general index to all three volumes. Each volume has, in addition, an index of its own.

It would be impossible to notice in a short review the number of papers published in these 'Transactions'; it must be enough to say that they contain the best work of the greatest experts in school hygiene to be found, not merely in England, but all over the globe, and in their contributions will be found school hygiene from every point of view—philanthropic, scholastic, pedagogic, medical, architectural—and from every clime. The fact that this important Congress was held in London appears to have given some impetus to the subject in England, despite the narrow-minded opposition of an alleged "liberal" government, opposition which was an open secret at the time and which was, luckily for school hygiene in Great Britain, timely defeated. It is not unlikely that the first rays of the dawning of a more enlightened educational movement were quickened by this Congress, and that it paved the way for the more ready acceptance of school medical inspection in this country. The writer, whilst at some of the meetings of the Congress, found his thoughts turning to two cherished names among England's greatest men—Charles Dickens and Thomas Henry Huxley, both of whom

worked so earnestly in the cause of education; what cause for satisfaction would both these great men have found could they but have listened to the work of the Congress, or have dipped into the three ample volumes which have been its consequence?

We have nothing to give but praise to these 'Transactions' and to the energetic secretaries who have arranged and edited them.

A TEXT-BOOK OF DISEASES OF THE EAR. By MACLEOD YEARSLEY, F.R.C.S., Senior Surgeon Royal Ear Hospital, etc. Price 18s. net. London: Kegan Paul, Trench & Co., Ltd., Dryden House, Gerrard Street, 1908.

MR. YEARSLEY has given us an example of progressive otology, more correctly speaking, progress in British otology. For we are convinced that ten years ago no British authority could have so handled his subject. The fact that the testing of hearing power is now dealt with in a rational manner, that definite deductions are to be drawn from certain combinations in the results obtained from those tests, is in itself an enormous stride. Mr. Yearsley's chapter upon the estimation of hearing also shows that however hard the student studies these problems he requires practical instruction as well. Mr. Yearsley gives an unusually full account of the varieties of rupture of the tympanic membrane, both as to cause and the situation of the rupture, illustrating his remarks by a detailed description of numerous instances which have come under his own observation.

The descriptions of the various inflammatory diseases of the middle ear, their complications and treatment, are full, clear and comprehensible, though the part on brain abscess is, maybe, too short and not sufficiently explicate for a book of this size; but in a special hospital, it is true, but few cases of this which come under this category are seen. The same cannot, however, be said in relation to the disease known as oto-sclerosis, for here Mr. Yearsley has given a full account of the disease, its history, pathology, course, symptoms, and treatment, showing a most intimate acquaintance with this disease, which will be of the greatest assistance to many aurists in this country, and, of course, to all students. Mr. Yearsley is to be especially congratulated on this chapter, as in Deuch's work the disease received almost no notice. The only thing we doubt is whether, in quoting Fisherich as injecting sixteen drops of fluid down a Weber-Liel's catheter, Mr. Yearsley tried to see how long it would take and what force would be required. We are sorry to find Mr. Yearsley so pessimistic as to the effects of treatment in oto-sclerosis.

The chapter on disease of the internal ear affections is one of the best, if not the best, in the book, from which but few will fail to derive interest or instruction. From its nature there is but little new to be expected, but the admirable way in which Mr. Yearsley marshals his facts and authorities and presents a clear picture of each condition is most effective.

The remaining chapters upon general disease in relation to aural affections in deaf-mutism, etc., are fully up to the standard of the rest of the book.

Mr. Yearsley has made enormous progress as a writer, and this book will carry his name down to posterity after having made him a place in his own time.